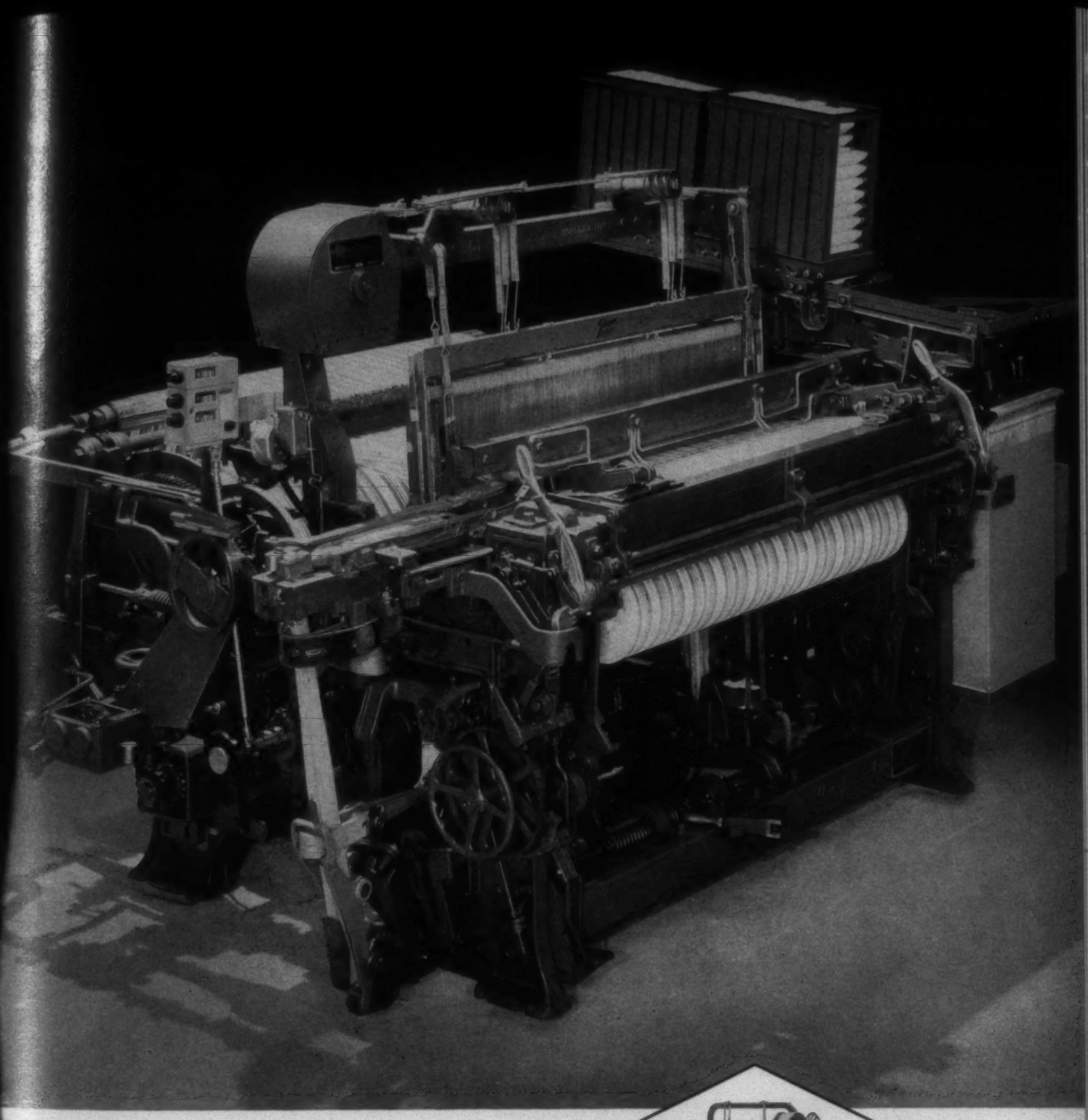
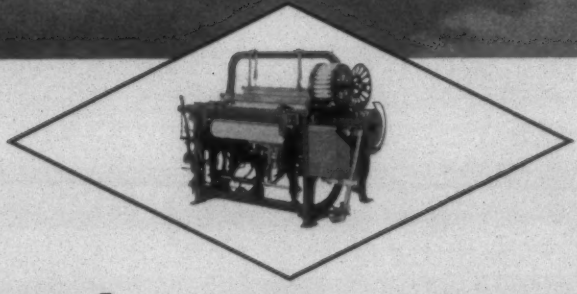


Visit the Draper exhibit at the Southern Textile Exposition October 6 thru 10. Booths No. 132-133-134.



Obsolescence is natural . . . in textile machinery because of continual research and development • Modern Draper looms with countless new improvements save time and money in weave sheds throughout the world • New Draper looms keep your mill in a competitive position in todays changing markets.

DRAPER CORPORATION

HOPEDALE, MASS. • ATLANTA, GA. • GREENSBORO, N.C. • SPARTANBURG, S.C.

New TERRELL PRODUCTS TO BE IN OPERATION

at the Greenville Textile Show **ANNEX 3**

TERMACO

AUTOMATIC-TERMACO HOPPER FEEDERS — Revolutionary device—automatically feeds quills into Type L and Type K quill cleaning machines through semi-automatic Termaco Bobbin Feeders.

TERMACO BOBBIN FEEDERS — Semi-automatic device enabling one operator to feed two Type L or two Type K Bobbin Cleaning Machines.

TYPE L LOOM BOBBIN CLEANERS — The fastest and most modern quill cleaning machine made today—lowest quill cleaning costs—complete freedom from quill damage.

TERMACO

TERMACO AUTOMATIC CONVEYOR SYSTEMS — Delivers quills cleaned by Bobbin Cleaning Machines to storage bins and then automatically delivers quills from storage bins to quiller hoppers.

TYPE M ROVING BOBBIN CLEANER — Returns on investments for Type M's average 6 months. No bobbin damage.

TERMACO LOOM PICKERS — Observe the new smooth light colored TERMACO pickers—regular price—life equals any rubberized fabric picker.

TERMACO

Schlafhorst SERVOLOOM AUTOCOPSER — This famous Quiller equipped with attachment to prepare tip bunches for the Draper Automatic Magazine.

LATEST HIGH SPEED AUTOCOPSERS — Quilling speeds up to 12,000 RPM. Boxing attachments for cottons, spuns, wools and worsted. Pinboard devices for filament yarns.

TERMACO

THE TERRELL MACHINE CO., INC.

3000 SOUTH BOULEVARD • P. O. BOX 928

CHARLOTTE, NORTH CAROLINA

NEW for NEW

SEE IT

IN OPERATION

at the

GREENVILLE TEXTILE SHOW

ANNEX 3

Imported by

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Sold and Serviced by

THE TERRELL MACHINE CO., INC.

CHARLOTTE, N. C.

Furniture courtesy of John H. Pray & Sons Co., Boston, Mass.

Shifting markets demand versatile looms — weave these, and other fabrics . . . with UNIFIL®

The amazing versatility of a UNIFIL-equipped weave room means you can switch filling from yarn to yarn, and supply package to supply package, in minutes. No more changing in quilling room . . . yarn inventory on quills practically eliminated . . . minimum work load adjustments.

Mills are proving every day that their UNIFIL-equipped looms have unexpected versatility. They are weaving cotton, spun and filament synthetics, textured and novelty yarns, all with high efficiency and improved quality.

UNIFIL can move your mill into new markets, with higher profits, quickly. *The versatile weave room is the* UNIFIL-*equipped weave room.* Your neighbors* have discovered it . . . when will UNIFIL Loom Winders mak more dollars for you?

* Amerotron, Berkshire-Hathawa Burlington, Cannon Mills, Cone Mil Dover Mill Group, Judson, Laure Pansy Weaving Mills, Ponemah Mil Riegel Textile, Stanwood Mills, J. Stevens, United Merchants, Woodsid Mills. (A partial list, only.)

23.8.8A

LEESONA®

UNIVERSAL WINDING COMPANY

For every production run . . .

keep your weaving schedules on time

with Clinton Products

For every warp-sizing job, you can rely on Clinton corn starches. These products yield sizes with uniform viscosity that produce the same results every time, because:

CONSISTENT FORMULATION MAKES CLINTON PRODUCTS RELIABLE

Three analytical control laboratories and several single-purpose testing stations are located at strategic points in our plant. They check every stage in the processing of *all* products . . . they check *all* finished products to be sure specifications are met exactly. That's why you can depend on Clinton products to do the job for which they are needed.

Your Clinton salesman can help you select the right starches to produce the sizings you want. And, should you need special production advice, *prompt* technical service is available when you need it. Call your Clinton salesman today, or write:

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CLINTON

. . . Where research today improves tomorrow's product

PRESENTING...

AT THE

GREENVILLE SHOW

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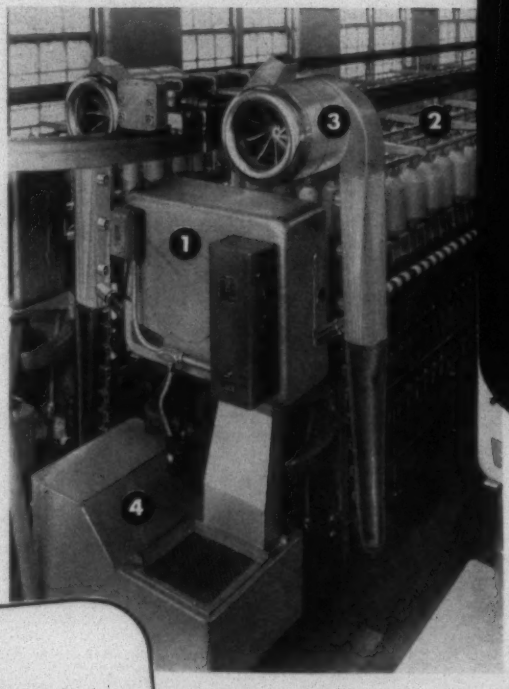
CONDITIONS • COLLECTS • CLEANS • CONVEYS

1. Bahnson Collecto-Vac—extra value features for collection of ends, lint, fly.
2. Bahnson Open-Aire Creel—the only open creel made of rugged steel with baked enamel finish.
3. Bahnson Cross-Jet Cleaner.—new design for cleaning entire frame plus walls and ceilings.
4. Bahnson Central Heat Removal System.—exclusive method for taking out heat from collection units and motor alley.
5. Bahnson Aero-Sweep Cleaner.—oscillating traveling unit cleans ceilings, beams, lights, piping with head-on air blasts.



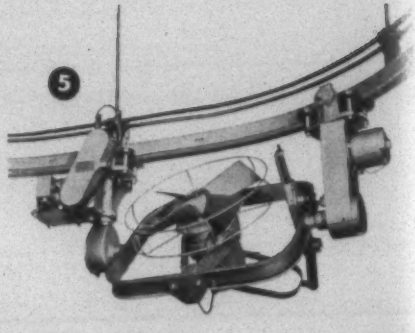
introducing

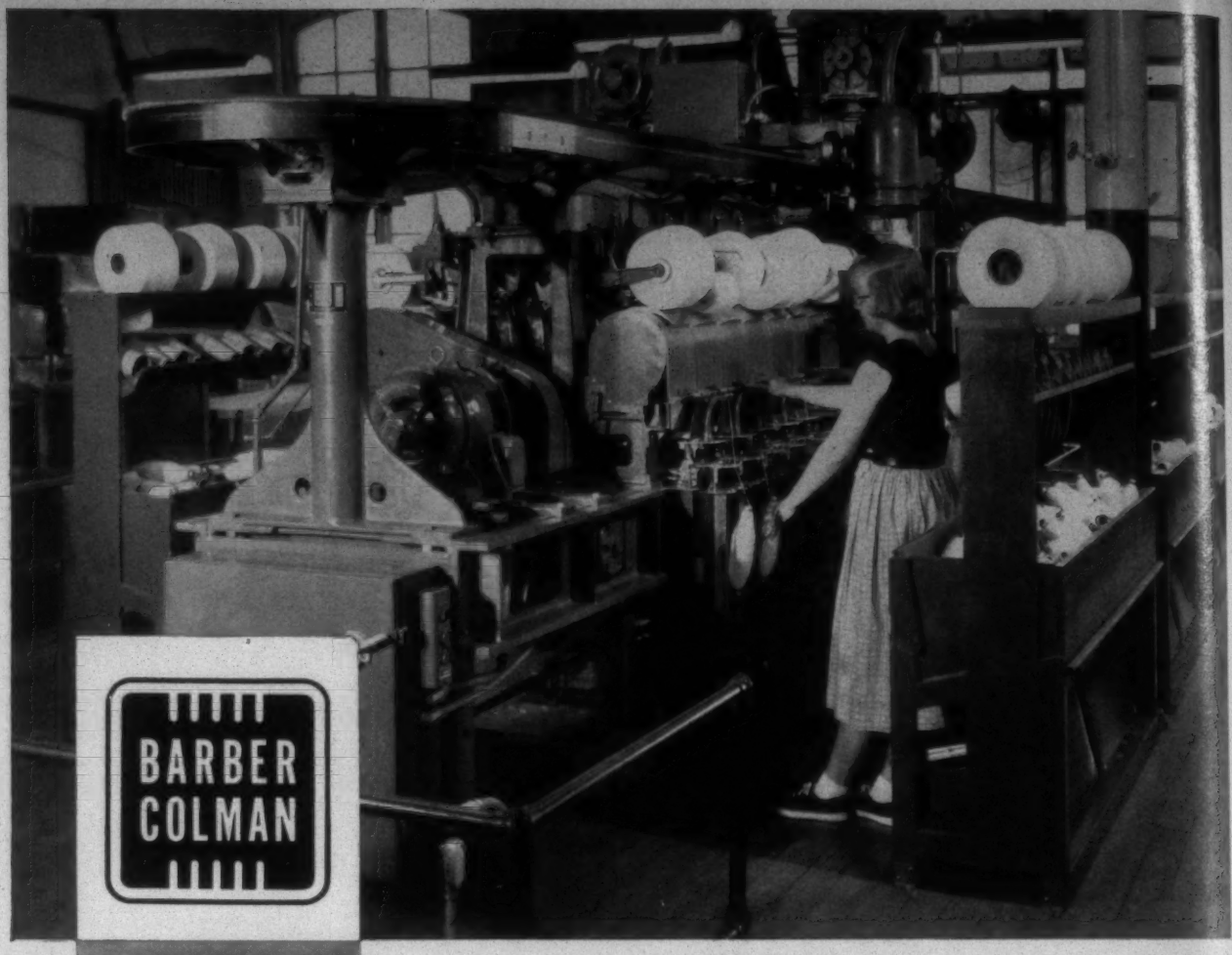
AN IMPORTANT NEW DEVELOPMENT
IN THE TEXTILE INDUSTRY

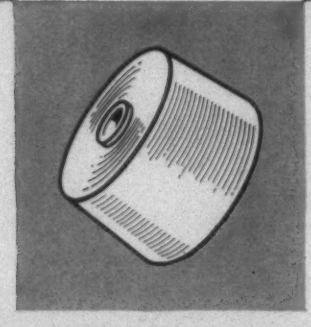
ADMC

AUTOMATIC DOFFING AND MATERIAL CONVEYING

SEE IT WORKING IN OUR SPACE AT THE SHOW!







TYPE DD AUTOMATIC SPOOLERS PRODUCE 6-6½ lb. 4° CONE PACKAGE

With the advent of shuttleless looms, and other machines of a similar nature, the need for a cone package and a magazining feature caused modifications in the Type D Automatic Spooler which resulted in the Type DD machine shown above. This spooler produces large cones with 4° tapered sides instead of cheeses with straight sides. The actual size and weight of the cone is much the same as the cheese, but the shape is different.

While the Type DD Automatic Spooler has been designed primarily to supply the shuttleless looms with a package suitable for handling the filling yarns, it also has a definite appeal to mills which backwind to sales or knitting cones. The use of the 4° cone as a supply package is also being tested and the results so far are very encouraging.

Provision for magazining is accomplished by putting a few turns of tail on the bottom of the cone starter, where it can be easily found and tied to the outer end of the following cone. This tail is put on in the new Starter Maker machine, a useful accessory to any spooler installation. Also, arrangements can be made to put the magazining tail on the cone at the Spooler if desired. *Write for further details.*

SEE THIS NEW MACHINE IN OPERATION

SOUTHERN TEXTILE EXHIBITION

GREENVILLE, S. C.
OCTOBER 6 - 10

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • WARP DRAWING MACHIN

BARBER-COLMAN COMPANY

ROCKFORD • ILLINOIS • U. S. A.

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water-soluble,
very level dyeing
vat dyes

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GENERAL DYESTUFF COMPANY

A SALES DIVISION OF

GENERAL ANILINE & FILM CORPORATION

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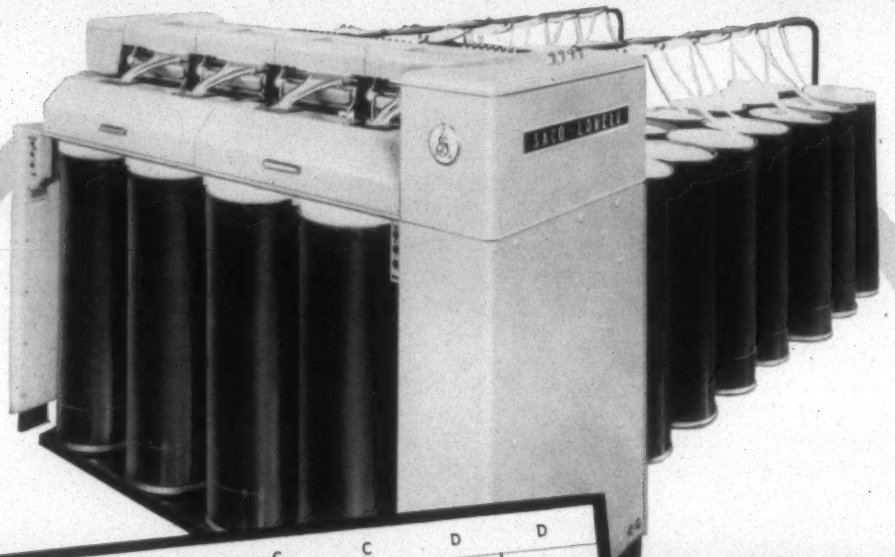
PROVIDENCE · SAN FRANCISCO · IN CANADA: CHEMICAL DEVELOPMENTS OF CANADA LTD., MONTREAL

Obtain highest production of quality sliver by every standard --

-- PER DELIVERY
-- PER MAN HOUR
-- PER HORSEPOWER
-- PER SQUARE FOOT OF FLOOR SPACE

New VERSAMATIC

Drawing Frame by SACO-LOWELL



Mill	A	A	B	C	C	D	D
Stock	Carded	Carded	Combed	Combed	Combed	Combed	Combed
Process	1st Process	2nd Process	1st Process	1st Process	2nd Process	1st Process	2nd Process
Model Versa-matic	4 Over 5	4 Over 5	3 Over 4	3 Over 4	3 Over 4	3 Over 4	3 Over 4
Sliver Fed	52.5 gr.	54 gr.	55 gr.	120 gr.	60 gr.	62 gr.	55 gr.
Ends Up	8	8	8	4	6	6	6
Speed	300 ft./min.	300 ft./min.	260 ft./min.	216 ft./min.	216 ft./min.	250 ft./min.	250 ft./min.
Sliver Delivered	54 gr.	56 gr.	55 gr.	60 gr.	60 gr.	55 gr.	55 gr.
Tester	Saco-Lowell	Saco-Lowell	Saco-Lowell	Brush	Brush		
Variation	16%-19%	16%-19%	10%-13%	14%-16%	11%-13%	82%	82%
Efficiency	92%-95%	92%-95%				12	12
Deliveries	16	16	60	32	32	24	24
Deliveries/Operator	32	32	30	32	32		
Can Size—Back	18" x 42"	16" x 42"	15" x 36"		14" x 36"	15" x 36"	15" x 36"
Can Size—Front	16" x 42"	16" x 42"	15" x 36"	14" x 36"	14" x 36"	3500 yds.	3500 yds.
Yards/Can	4000 yds.	4300 yds.	3300 yds.	2850 yds.	2850 yds.	27.5 lbs.	27.5 lbs.
Pounds/Can	31 lbs.	34 lbs.	25.9 lbs.	24.4 lbs.	24.4 lbs.	6.75	6.00
Draft	7.77	7.71	8.03	8.03	6.00	772 lbs.	772 lbs.
Pounds/Man Hour	1380 lbs.	1430 lbs.	1105 lbs.	1070 lbs.	1070 lbs.		

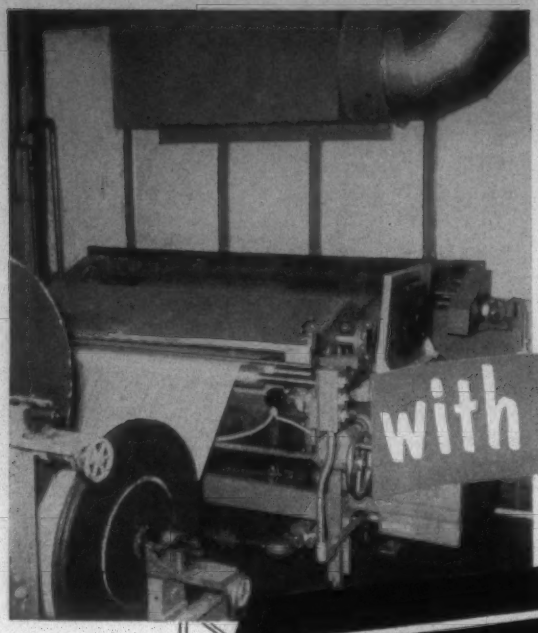
THESE PRODUCTION FIGURES TELL THE STORY AND PROVE BEYOND DOUBT THAT VERSA-MATIC DRAWING FRAMES BELONG IN YOUR MILL

Contact your nearest Saco-Lowell office for complete information and a demonstration.

SACO-LOWELL SHOPS

60 BATTERYMARCH STREET, BOSTON 10, MASS.

Shops at BIDDEFORD & SACO, MAINE; SANFORD, N.C.; EASLEY, S.C. Sales Offices: CHARLOTTE · GREENSBORO · GREENVILLE · ATLANTA

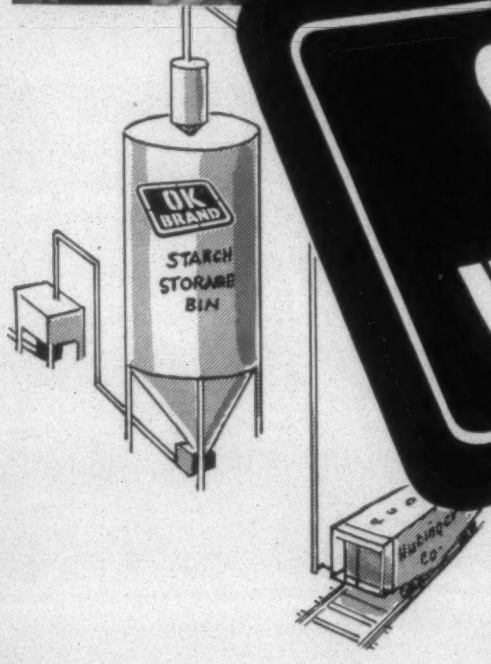


improve your sizing, printing, finishing . . .

with the Greatest of Ease with

OK BRAND

STARCHES and GUMS



There's a complete line of superior, quality controlled, OK BRAND textile starches and gums to help you get improved finishing, printing and sizing, reduce your costs, and assure you of consistent quality in your production.

You can enjoy all these benefits with the greatest of ease because better, more convenient systems for handling starches and gums have been developed by Hubinger textile experts. One of these trained, experienced textile technicians is near-by, prepared to help with any *special problems* you may have, too. For prompt attention to your needs without obligation, write, wire or phone:

IRA L. GRIFFIN & SONS
P. O. Box 10474
Charlotte, N. C.
(Phone: Franklin 6-5583)

CARL F. MERRITT
Box 346-A
Piedmont, S. C.
(Phone: Greenville 2-0424)

JOE R. MYERS
1817 Dell Drive
Columbus, Georgia
(Phone: Fairfax 7-2244)

BOSTON OFFICE
192 State Street
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KEOKUK, IOWA

HUBINGER — QUALITY PRODUCTS from CORN — 77 YEARS

1958 SpinSaVac®

Unit Collection Cabinet (Type HI)

Compact, starter on side, full access to motor alley

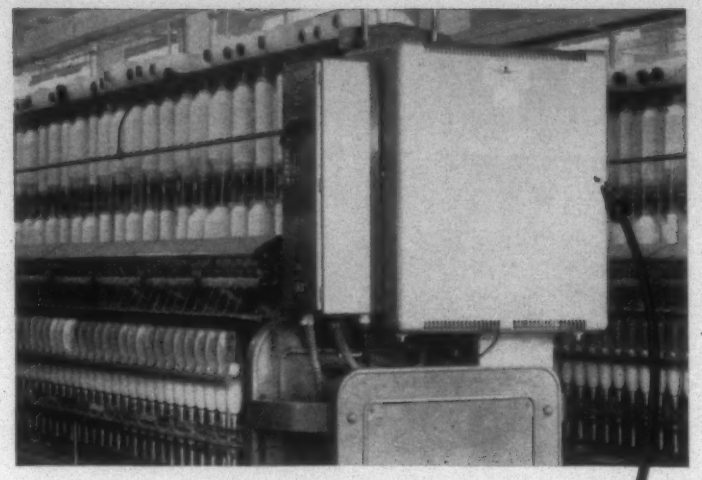
Flush surfaces

Large conical screen—fine mesh saran

Ample volume for collected lint

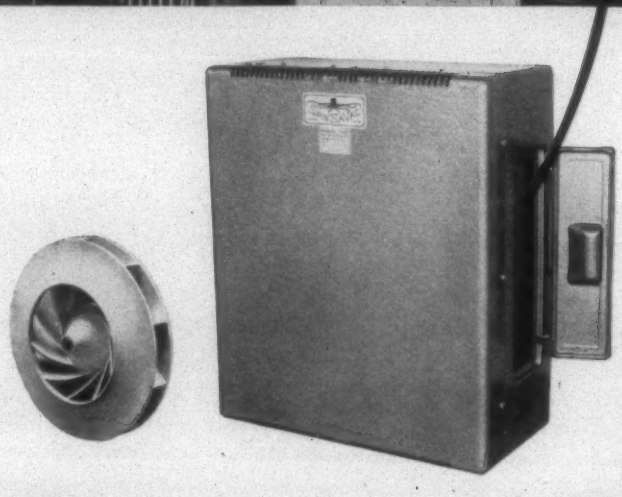
Large door for easy lint removal—air tight gasket locked without gluing

Air exhausted—up, down, or both—at low velocity, well diffused



Central Collection (alternate, not shown)

With provision for exhausting or returning room air



Clearing Conduit

Thick-walled, smooth, ethyl-cellulose

Strong, rigid, non-warping

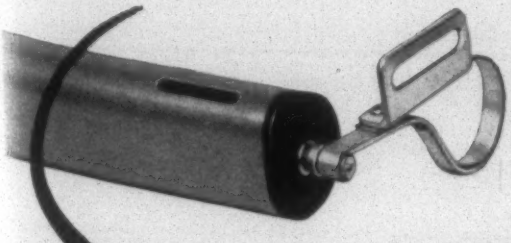
Spring mounted

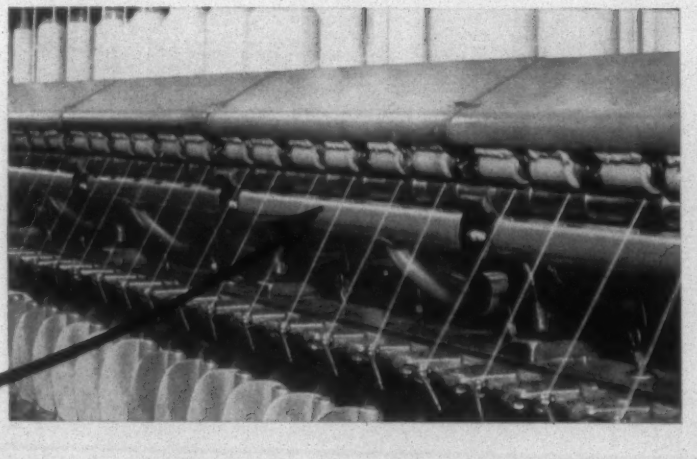
Pear-shaped for accurate positioning and easy piecing up

Conduits on frame interchangeable without adjustment

Vacuum Impeller

Double-shrouded air foil type, for greater efficiency and higher vacuum





Write or 'phone for further information about SpinSaVac and SpinSaCreel

Parks-Cramer Company

FITCHBURG, MASS. CHARLOTTE, N. C. ATLANTA, GA.

408

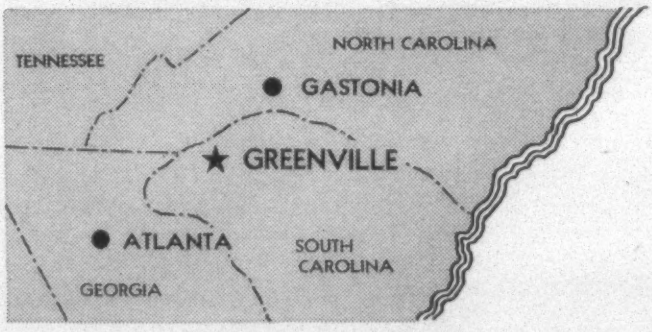
Now a New Southern Plant

to better serve your increasing demands

FOR Tuffer TRADE MARK *Card Clothing*

right in the Heart of the Textile South

at Greenville, South Carolina



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STOCK and SERVICE wait your request

both COTTON and WOOLEN Cards

with 92 years of experience behind them

Our Southern Agent E. Jack Lawrence is Manager

TELEPHONE CEdar 9-6263

or write to Howard Bros., 12 Wade Hampton Blvd., Greenville

We will look for You at Booths 252-253 at the Southern Textile Exposition in Greenville, October 6th to 10th

T11

First introduced in 1928...

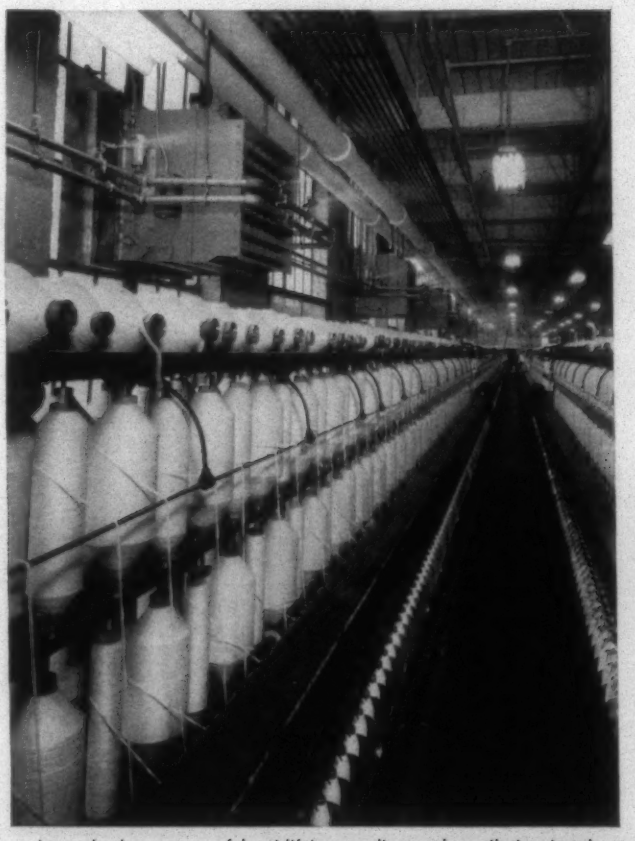
1928 was a banner year! That was the year Cannon Mills Company brought out its now-famous "towel ensemble" . . . announced *colored* hand and bath towels for the first time, as well. It was back in 1928, too, that Cannon also insured *finer* product quality with another innovation . . . AMCO Humidification.

In the 30 years since then, as Cannon has diversified its product line and added new manufacturing facilities, American Moistening Company has continued to work closely with Cannon in the installation of *carefully engineered* Amco Air Conditioning Systems.

Amco, of course, designs all types of systems — humidification; humidification in combination with cooling, as in a ductless evaporative cooling system; unit dry-duct systems; or central station air conditioning.

For expert advice, backed by many years of textile air conditioning experience, let an Amco engineer suggest a solution to *your* particular air conditioning problem. Naturally, there's no obligation.

Amco No. 6 Atomizer, one of many quality Amco components, produces an exceptionally fine, smoke-like spray. Its better performance and ease of maintenance make it a superior, automatically self-cleaning atomizer both for new installations and for replacements.



Amco ductless system of humidifying, cooling and ventilating installation in spinning room at Cannon Mills plant in Kannapolis, N. C.

AMCO

SINCE 1888

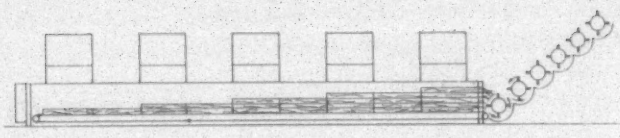
AIR CONDITIONING EQUIPMENT

AMERICAN MOISTENING COMPANY • CLEVELAND, NORTH CAROLINA

BRANCHES: ATLANTA, GA. • PROVIDENCE, R. I. • TORONTO, ONTARIO

FIBER CONTROLS

BLENDING AND CLEANING SYSTEMS FOR MAXIMUM EFFICIENCY AND ECONOMY



SYNCHROMATIC BLENDING SYSTEM — designed to Prevent False Blends under all conditions. Will blend ANY combination of fibers automatically. Labor Saving—automatic operation removes the "human element." Facilitates constant quality and cost control . . . reduces waste. Maintains an accuracy of blend of plus or minus 1%.

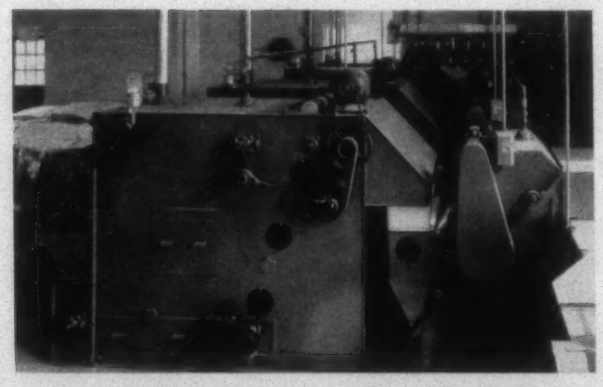
Perfection of design makes this system extremely Economical to operate and maintain.

Top photo—a typical installation of the Synchromatic Blending System.

Drawing at left—shows the process flow. The conveyor is synchronized to receive accurately weighed fibers from each of the feeders forming a continuous, interconnected, overlapping band of sandwiches which is fed into the blender.

We invite your inquiry concerning more complete details of our Blending and Cleaning equipment.

Call or write:



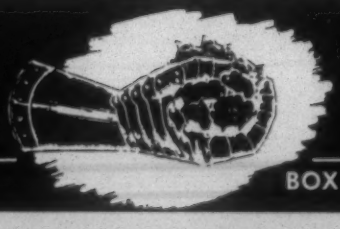
FC FEEDERS and JUNIOR CLEANERS

FIBER CONTROLS modern Blending Feeders and Pre-Opening Cleaners enable you to increase the production while maintaining a high standard of quality.

Write for Spec. sheets.

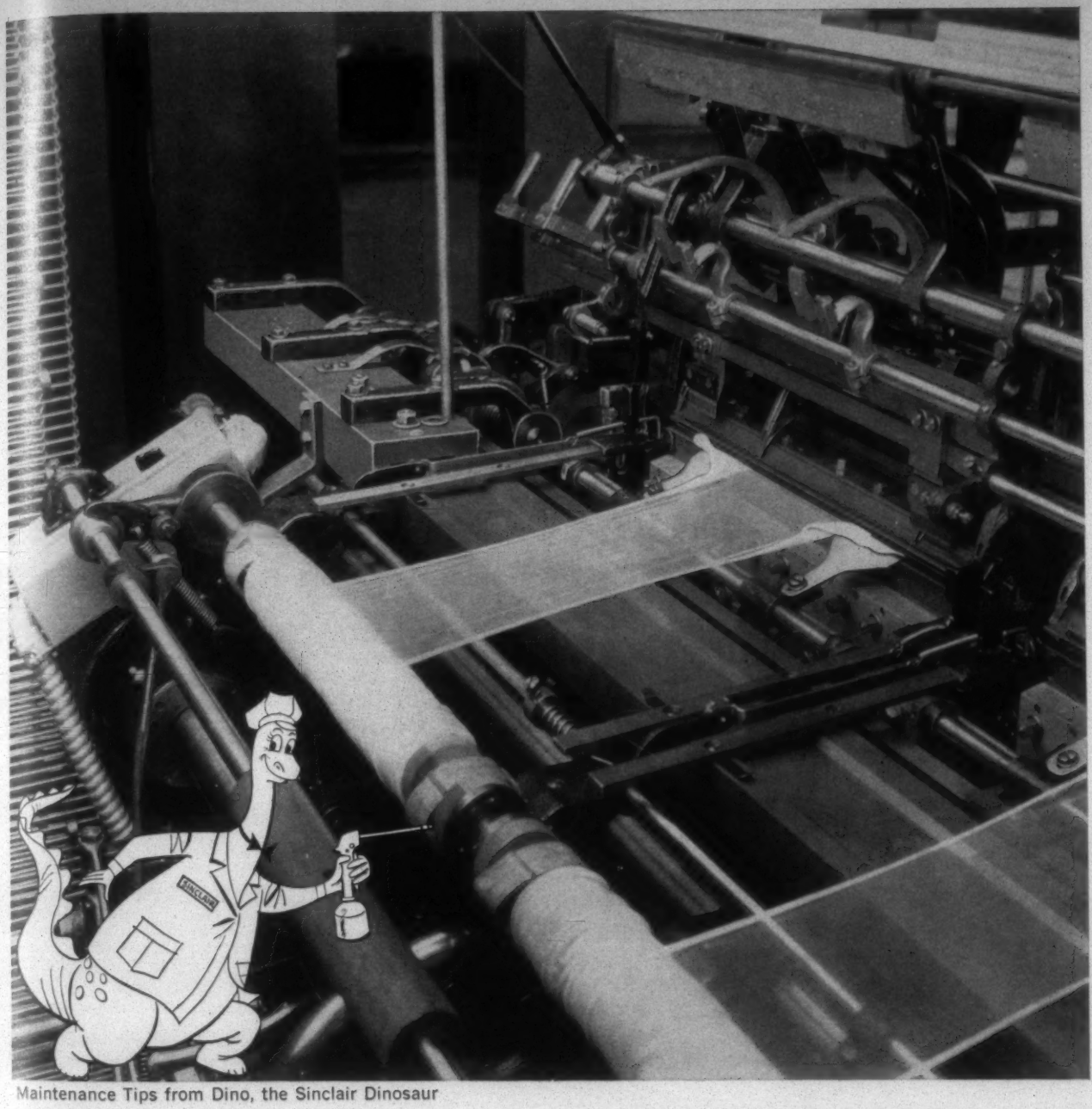
FC-83 SCREENLESS CONDENSER

This NEW condenser, made for Heavy Duty and High Production, has proven itself in efficiency and capacity production. Will handle up to 2000 lbs. of fiber per hour through ducts approximately 200 ft. in distance. Will discharge fiber without — Tumbling — Rolling or Pilling. Self-Cleaning. Write for spec. sheet.



FIBER CONTROLS CORPORATION

BOX 1358 *GASTONIA, NORTH CAROLINA*



Maintenance Tips from Dino, the Sinclair Dinosaur

Makes Needles Tend to Their Knitting

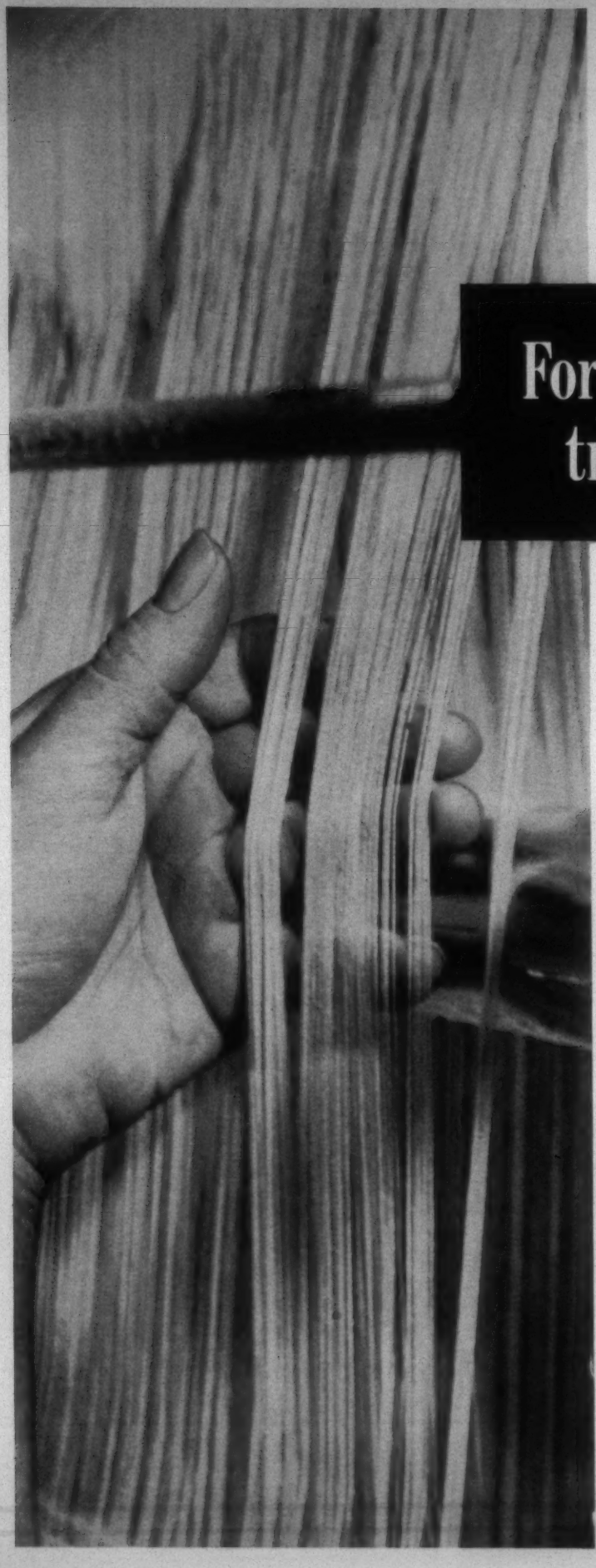
Here's why Sinclair Crystoil keeps needles knitting. This specially-formulated needle oil keeps needles free of rust, resists encrustation, actually removes size or crust build-up.

Another advantage: Crystoil's light color makes it easier to wash stains out of knitted goods. And because Crystoil contains a special oiliness agent for greater anti-wear and anti-rust protection, needles last longer, too.

Look into *all* the advantages of Sinclair Crystoil or Crystoil Light (for finer gauge machines). Call your local Sinclair Representative or write Sinclair Refining Company, Technical Service Division, 600 Fifth Avenue, New York 20, N. Y. *There's no obligation.*

SINCLAIR

CRYSTOIL NEEDLE OILS



For clearer size, truer colors

. . . in warp sizing and in finishing, use TEN-O-FILM starches.

In warp sizing, TEN-O-FILM starches cook completely in thirty minutes and remain stable through prolonged heating and circulating. Sizing and desizing of all types and blends of yarns may be done at lower temperatures to reduce "bleeding," and permit use of a great variety of dyes.

In finishing, the clarity of film produced by TEN-O-FILM is a real advantage. There is no masking of colors in dyeing man-made fibers.

Our technical service group has had wide experience and marked success in adapting this versatile starch to the varied needs of many textile applications. The production advantages and process improvements achieved by TEN-O-FILM can be fitted to your needs by consulting our textile technicians. Contact our nearest sales office or write direct.

TEN-O-FILM® starche

Fine products for the Textile Industry: EAGLE® • FOXHEA CLARO® • GLOBE® and TEN-O-FILM® starches • GLOBE® a EXCELLO® Dextrines.

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You are cordially invited to visit
BOOTH #445 at the
20th SOUTHERN TEXTILE EXPOSITION

colors wake up and sing... when you print or dye with **AMANTHRENE***

With Amanthrene Vats your cottons and rayons will come vibrantly alive . . . and stay that way — color-fresh and as bright as spring. Amanthrenes give outstanding color fastness to washing and to light in both paste and powder forms. A complete range of these superior vat colors enables you to satisfy each and every individual requirement.

For full information and samples or a demonstration, simply contact your local Koppers representative. And don't forget — our laboratory facilities and technicians are readily available to assist you every step of the way. *REG. U.S. PAT. OFF.

KOPPERS COMPANY, INC.
CHEMICALS AND DYESTUFFS DIVISION
Pittsburgh 19, Pa.

KOPPERS DYES ARE RIGHT FOR EVERY FIBER

KOPPERS

(FORMERLY AMERICAN ANILINE PRODUCTS) **PLANT**: Lock Haven, Pa.

BRANCHES: Providence, R. I. • Philadelphia, Pa. • Paterson, N. J. Chicago, Ill. • Charlotte, N. C. • Chattanooga, Tenn. Columbus, Ga. • Los Angeles, Calif.

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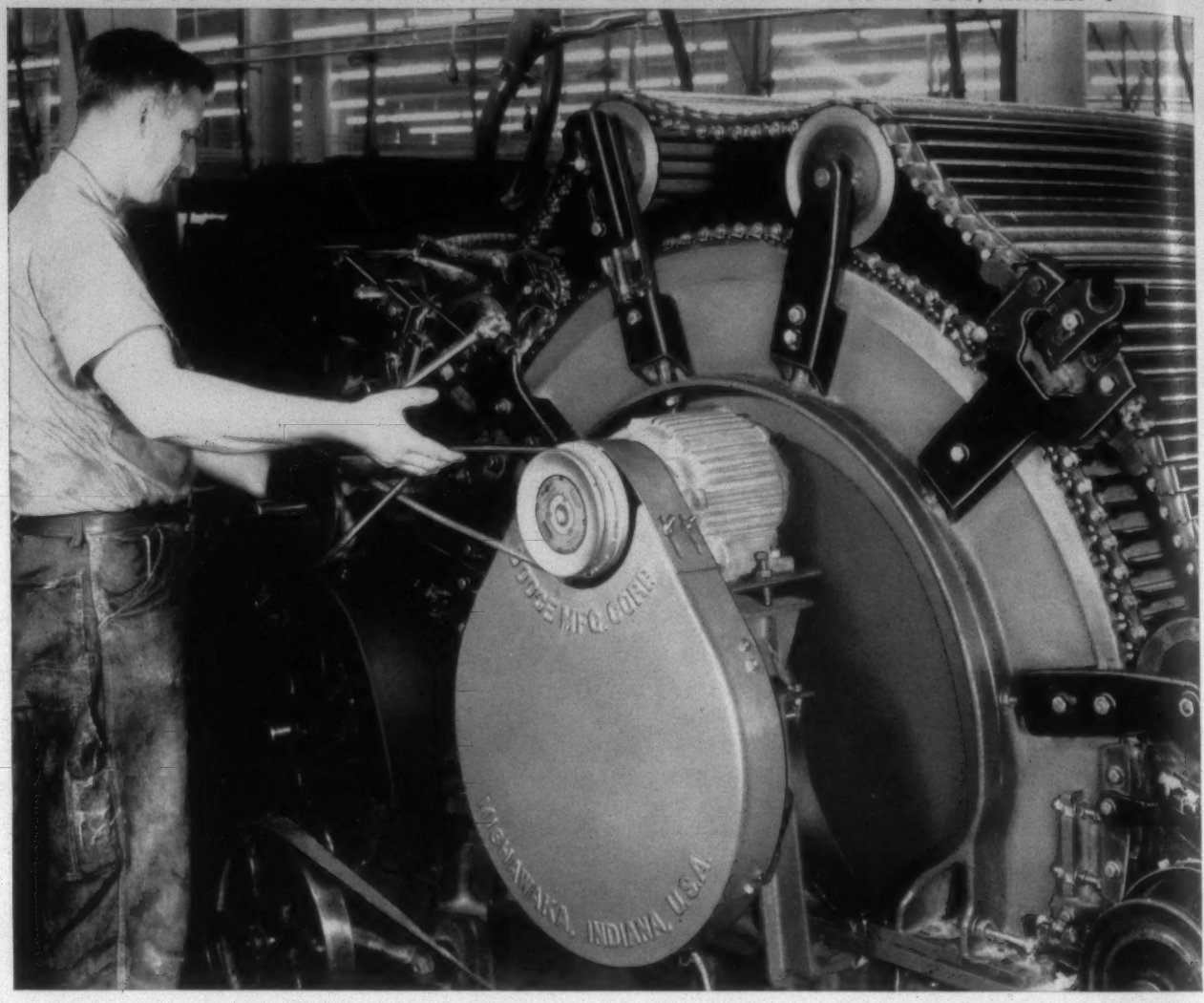
SEE US AT THE SOUTHERN TEXTILE EXPOSITION • BOOTH 803, ANNEX 4



INDIVIDUAL CARD DRIVE GIVES SOFT STARTS

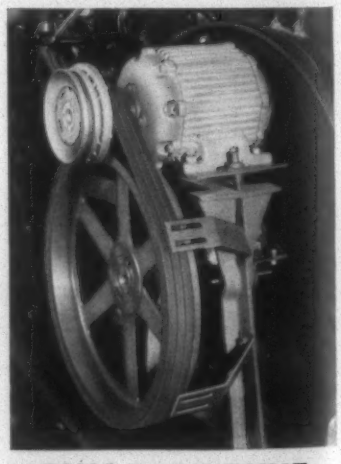
...ACCELERATES QUICKLY TO FULL SPEED

...AVOIDS EXCESSIVE STRAIN

Flexidyne, heart of this new complete Card Drive by Dodge, picks up the load smoothly . . . protects machinery and motor against shock and overload . . . delivers 100% efficiency during running cycle. Flexidyne, *the Dry Fluid Drive,* eliminates need for high torque motors and expensive controls, saves power, provides a new and better way to drive textile machines.

Note the special aluminum pulley mounted on Flexidyne housing, enabling quick, convenient operation of stripper. Pedestal has adjustable motor base to control tension on V-belts. You should have the full story of all the advantages of the new Dodge Flexidyne Card Drive. Ask your local Dodge Distributor, or write us, for new illustrated Bulletin A-653.

DODGE MANUFACTURING CORPORATION
6700 Union Street, Mishawaka, Indiana



NEW! FLEXIDYNE CARD DRIVE

A complete package, ready to install.

- Flexidyne, keyed to motor shaft
- Pedestal, supporting motor
- V-flat drive
- Aluminum stripper pulley
- Aluminum guard

DODGE
of Mishawaka, Ind.

CALL THE TRANSMISSIONEER—your local Dodge Distributor. Factory trained by Dodge, he can give you valuable help on new, cost-saving methods. Look in the *white* pages of your telephone directory for "Dodge Transmissioneer."

Something Special

FOR YOU TO SEE

at the Southern Textile Exposition

2 Brand New Stehedco REEDS

STEHEDCO COMBINATION REED—Get the combined advantages of pitch band and all metal construction in one reed at very low cost. The top pitch band rib gives dent flexibility for easy entering. The bottom all metal construction presents a more rigid and better spaced reed to the cloth at the beat-up position. To provide maximum strength and rigidity the top rib is armored same as the armored reed described below.

STEHEDCO ARMORED REED—This is a super pitch band reed with metal tubes locked in place around the ribs by an exclusive process that assures maximum rigidity. Two of the many advantages found in the Stehedco Armored Reed are the drastic increase in strength with no increase in price over the conventional pitch band reed, and the elimination of lame spots in the reed caused by worn or damaged lay slots or reed caps.

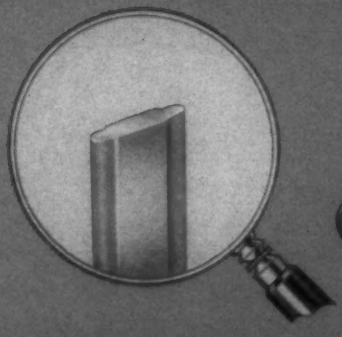
RIGIDENT WIRE—a new dent shape as illustrated in enlarged view. Provides greater strength and rigidity, and also gives more air space at the edges for knot entry and easier beat-up.

Ask one of our Sales Engineers to show you how you can profit by these new Stehedco developments. See us at the Southern Textile Exposition October 6 to 10.

COMBINATION REED

ARMORED REED

Stehedco
STEEL HEDDLE MFG. CO.
PHILADELPHIA 32, PA.
SOUTHERN SHUTTLE DIV.
GREENVILLE, S.C.
Southern



R-582A

Other Plants and Offices: Granby, Quebec, Canada • Lawrence, Mass. • Greensboro, N.C. • Atlanta, Ga. • Textile Supply Co., Dallas, Texas • Albert R. Breen, Chicago, Ill.

For The Textile Industry's Use

— NEW MACHINERY, EQUIPMENT AND SUPPLIES —

Whitin Spinning Frame

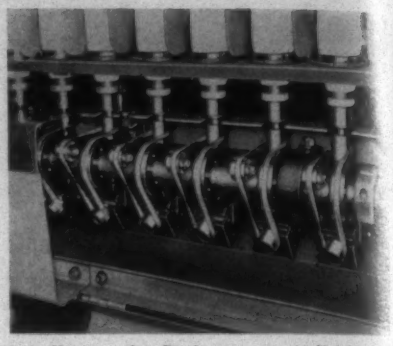
A new textile spinning frame, called the Piedmont, combining many recent technological advances with Raymond Loewy styling has been announced by the Whitin Machine Works, Whitinsville, Mass. It will be shown to the public for the first time at the Greenville show, October 6-10. Operational efficiency, performance and productivity of the machine will be attractive to manufacturing executives whose specific goals are based on costs. Its pleasing appearance will instill pride in those who work with it.

Piedmont's new features include: (1) 27" over-all width, (2) covered individual spindle drive, (3) side drive shafts, (4) straight line of spinning, (5) traverses up to 12", and (6) scientific balloon control ring application. All gearing and a new builder unit are enclosed in the head end. Pneumatic waste removal unit and a new arrangement to disperse motor heat are integrated in the basic design. Unitrol top arm weighting and the latest type of Whitin Super-Draft two-apron drafting systems are employed. Either 3½" or 4" gauge with appropriate ring size are available. Machines can be made with up to 288 spindles in 3½" gauge or 240 spindles in 4" gauge. The Piedmont is available in spindle increments of 24.

Mill Tests

Five years in development, the Piedmont has been thoroughly tested both under simulated mill conditions and in mills in the broad range of production spinning embracing all counts. Piedmont results in a markedly different frame embracing several important operating and mechanical advantages. Chief among these are: reduced floor space, elimination of the cylinder, tapes, underframe pulleys and cross shafts; better spinning and higher yarn quality; decreased operating, production and maintenance costs. Of special importance is the sharp reduction of air currents in, under and beside the machine as well as the improved control of relative humidity in drafting and spinning zones.

Particular attention has been given to securing constructive rigidity and capacity for absorption of vibration. The head end is an assembled cast iron unit, side rails and samsons are also cast iron. Ring rails and roller beams are steel. For added rigidity, single piece roll stands extend across the frame connecting both sides. Running the length of the frame, two spindle drive shafts are mounted close to the spindle rail.



Spindles on the Piedmont are individually driven by narrow, easily applied, endless long wearing belts.

Single Spindle Drive

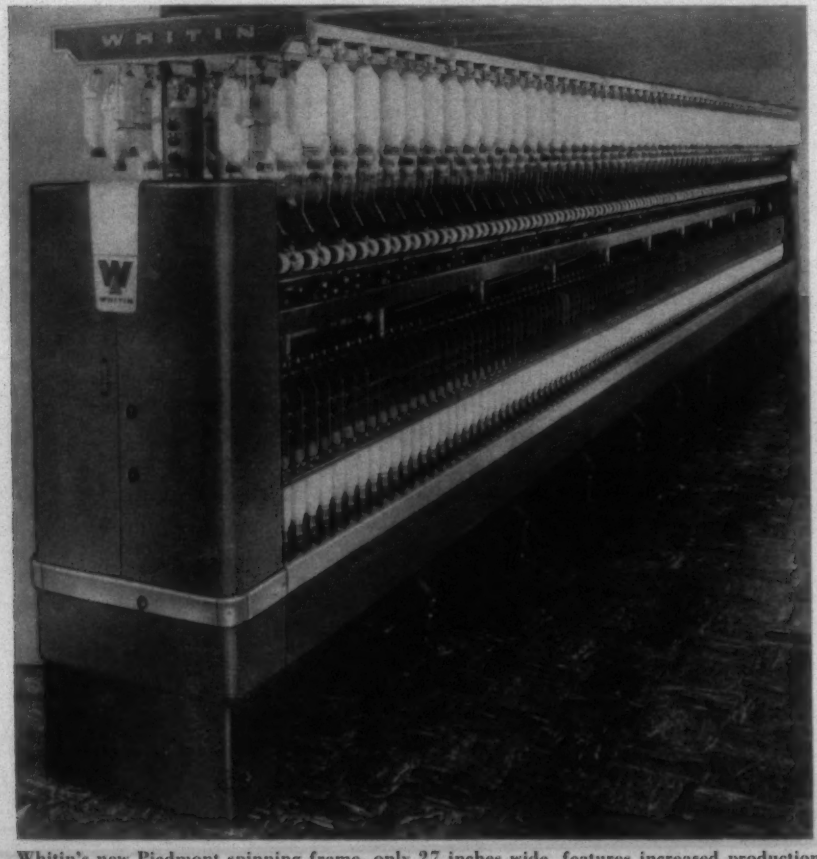
A new drive mechanism is employed on the Piedmont frame. Each spindle is driven by a small, strong, endless belt. With 180° contact whorl, this belt drive provides uniform spindle speeds and uniform twist generation. The entire driving unit and idler pulleys are mounted on sealed ball bearings. Speed ratio of spindle drive shaft to spindle is 2.50:1. Starting, stopping or operation of any one spindle in no way affects the operation of any other spindle.

Less than 10 seconds is required to replace a driving belt whether machine is stopped or running. The new single spindle drive eliminates cylinder, tapes and tape tension pulleys. Air turbulence created by large packages, high spindle speeds, long traverses and the conventional cylinder drive border on the critical. By eliminating a large share of the air turbulence, advantages of the single spindle drive are apparent in higher speed operation.

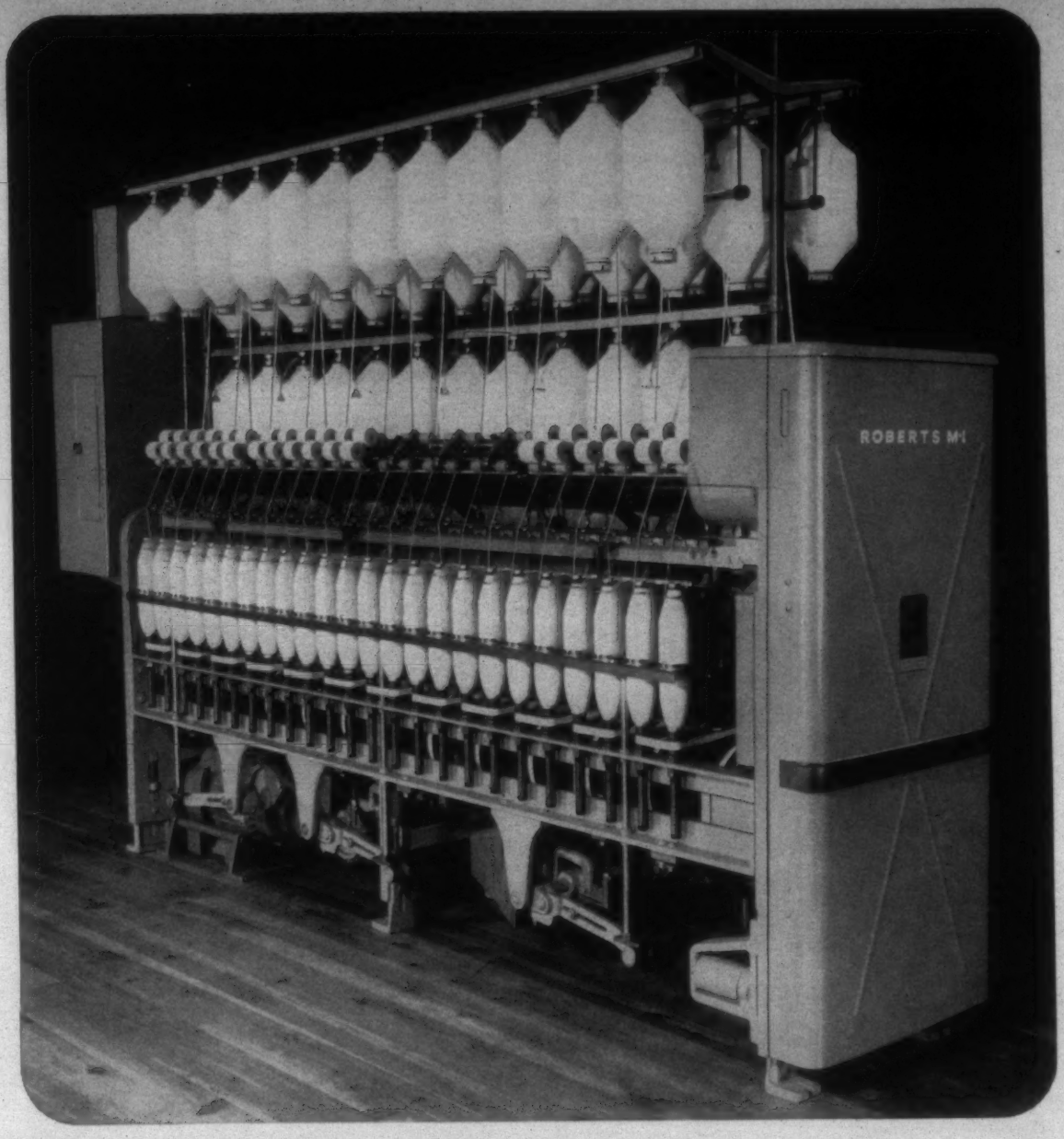
Straight line spinning is used on the Piedmont. Principal advantage of a straight line from front rolls to the spindle is that twist can run unimpeded from traveler to the bite of the front rolls. Even distribution of the twist gives increased yarn strength. Straight line of spinning, higher uniform spindle speeds, improved twist distribution and scientific balloon control combine to give the Piedmont higher production of more even yarns.

Balloon Control

Balloon control becomes critical as package sizes increase above 9" and as speed increases. More than 25 variables are involved in scientific balloon control such as ring diameter, spindle speed, count and yarn diameter, angle of yarn pull, air drag, traveler weight and many more. Piedmont's balloon control arrangement employs two



Whitin's new Piedmont spinning frame, only 27 inches wide, features increased production from less floor space.



ROBERTS SPINNING

ALL NEW—ALL BALL BEARING ROBERTS M-1 SPINNING FRAME

330 Roberts 25-inch Frames, with over 105,000 spindles, have been installed in American mills in the past two years. These Roberts Frames are very ruggedly built and exceptionally simple in design. Only tried and proven principles are used, which insure consistent high quality results.

Roberts M-1 Frames produce better yarns at higher front roll speeds and put more ounces of yarn on the bobbin. The ball bearing construction provides smoother operation plus reduced power use. Changes in draft, twist, lay, or speed are made very simply. Roberts M-1 Frames are available in 25-, 36- and 39-inch widths, for cotton, synthetics, worsted or blends, in short or long fiber lengths.

The benefits of big package spinning are available at

$32 to $40 per spindle

including freight and installation

ROBERTS COMPANY

SANFORD, NORTH CAROLINA

FOR THE TEXTILE INDUSTRY'S USE—

control rings slightly larger than the spinning ring. Moving simultaneously and over the same distance, the rings act to separate the balloon into several smaller balloons. Maintaining the same relationship through the traverse, optimum balloon control is realized.

Whitin's pioneer spindle is antifriction type and is equipped with a new positive-action hand brake. Brake lever is conveniently located on top of the spindle drive housing. It acts in a squeezing motion applying equal pressure to both sides of spindle. Pioneer spindles are strong and stable in running performance at high speeds and have low maintenance, lubrication and operational costs.

Head End Gearing

Main drive gearing, draft gearing, complete builder and traverse mechanisms are all contained within the head end. All gears used are case hardened steel, precisely cut and with same bore, face and pitch to permit interchangeability of draft, twist and lay gears. Eight bearings require relubrication at 6-month intervals, all other head end bearings are sealed ball bearings. All gears are easy of access, safety-lock doors open wide and automatically shut the machine off when open. Three ranges of draft are obtainable by changing two gears. Total draft range is 5-75.

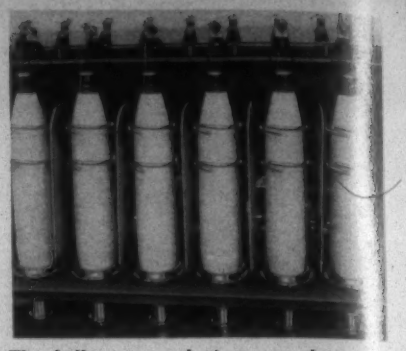
For any one of the three draft constants, 1.33, 2.0 or 4.0, the number of teeth in the single draft gear equals the draft desired multiplied by the constant used. Draft change gear calculation thus is greatly simplified. A broad range of lay selection is available for flexibility and accuracy.

New Builder

Piedmont's new builder design provides an interesting and significant improvement. Cam action is transmitted into precisely controlled motions for the ring rails and balloon control rings. Some of its distinguishing features are: (1) simplified adjustments and operation, (2) accessibility for changing winds, and (3) easy and exact pick selection.

The cam action is transmitted to a horizontal shaft through the new builder motion. Directly connected to this shaft, ring rail chains and counterbalance springs provide positively uniform raising and lowering motions. The builder provides a new degree of precise ring rail motion so important to good bobbin tapers, formation, wind, yarn lay and high-speed wind off. Warp, filling or combination cams can be used. Guided by large, lint-free concave guide rolls, ring rail chains effect a steady motion of the ring rails. Compensating cams and heavy spring counterbalancing combine to provide uniformity of movement with no binding or jumping during the cycle.

Whitin's Super-Draft is used on the Piedmont. The drafting system has been used on frames employing more than 12,000,000 spindles. Bottom rolls are case hardened and screw jointed, and carefully



The balloon control rings are always the same distance from each other at all points of the traverse.

manufactured to close tolerances. Since non-lubricated top rolls are used in the middle and back, no lubrication is required except for several-year-cycle lubrication of the front top rolls. Unitrol top arm weighting and a single line of revolving clearers is used, leaving the remainder of the drafting area open to the cleaning action of the overhead cleaners.

Waste And Motor Heat Removal

Integrated into the basic frame design, waste removal units and broken end collectors operate to maintain cleanliness while occupying the minimum amount of space. Clean air from the waste removal system in the foot end passes over the motor, entirely enclosed in the foot end, and is then blown upwards or directionally as desired. This Pneumakool system, developed by the Pneumafil Corp., precludes heat formations near the end of the frame and its attendant reduction of humidity in that area.

A new umbrella creel has been designed for the Piedmont providing most desirable bobbin placement and permits better cleaning. Casablancas bobbin holders are employed. A 2-post creel support increases rigidity of the unit.

Features of the new Whitin Piedmont aggregate contributions to higher speeds, greater production, improved yarn quality, fewer ends down, reduced space use and decreased operating, maintenance and production costs. The open construction provides complete freedom from clutter inviting minimum use of air cleaning.

(Request Item No. I-1

Textile Drive

Reeves Pulley Co., a division of Reliance Electric & Engineering Co., has announced the introduction of a new low-cost Vari-Spin textile drive, designated as the number 975-T Textile Pulley with 975-4 motor base and belt. The pulleys are available in 7½, 10 or 15 h.p. and are adjustable to any speed setting in the 2 to 1 speed range. The unit is adjustable while the frame is in operation.

The new unit is said to be unusually compact, utilizing a minimum height rugged steel base and a new short length disc assembly for the maximum in-space efficiency. It features the special field-tested textile belt specifically designed for spin-

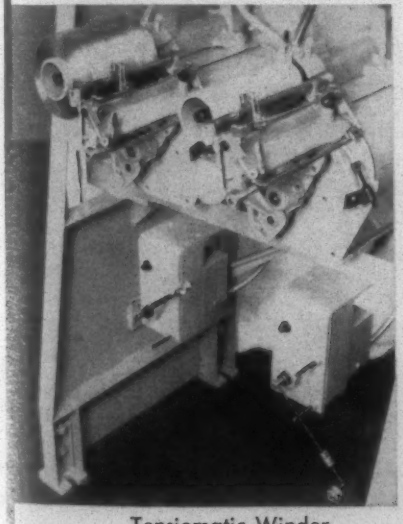
FOSTER TAKEUP WINDERS

For Melt-Spun, Wet-Spun and Dry-Spun Synthetic Fibre Yarns

Model 403
for Melt-Spun Yarns

Long Experience in the Field

We have had long experience in the design and manufacture of takeup winders for melt-spun, wet-spun and dry-spun synthetic fibre yarns. We have made and are now making machines of this type for leading producers of synthetic fibres. We illustrate herewith the two types of machines and describe briefly how they operate.



Tensiomatic Winder
for Wet-Spun and Dry-Spun Yarns

MODEL 403

For continuous winding of synthetic melt-spun yarns direct from spinneret at speeds up to 6000 ft. per minute. Yarn (15 to 1200 drawn denier) travels from spinneret down through heated chimney over finish rolls, with ceramic guides under each to maintain proper arc of contact, to a series of Godet feed rolls, delivering the yarn to a reciprocating traverse guide (actuated by independently driven traverse cam) and to the package core, which is driven by a chrome plated steel roll. Pressure of package on roll automatically adjusted as its weight increases. One 5¼" traverse package, two 3¼" traverse packages, or four 1" traverse packages per holder. Drive roll shaft and feed rolls driven by separate synchronous motors. Ribbon wind is eliminated. 16" gauge, 56 spindles with 2 independent drives (28 spindles each).

TENSIOMATIC WINDER

For continuous winding of wet-spun or dry-spun synthetic yarns direct from spinneret to 6" traverse packages (1 or 2 packages per position) or to 10" traverse packages weighing up to 30 lbs. Speeds up to 450 feet per minute. Precise wind machine. As package builds up and yarn speed increases, speed of motor is automatically and proportionately decreased by means of dancer rolls and an electronic control device.

Our Engineers Will Work With You

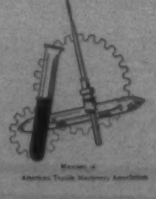
If you are developing a new synthetic fibre, it will pay you to consult our engineers regarding your winding requirements. They are familiar with your problems and can custom design a machine to your requirements.

FOSTER MACHINE COMPANY

A Yarn Winder for Every Purpose

Westfield, Massachusetts, U.S.A.

Southern Office — Johnston Bldg., Charlotte, N. C. • *Canadian Representative* — Ross Whitehead & Co., Ltd., 1475 Mountain St., Montreal, Que. and 100 Dixie Plaza, Port Credit, Ontario
European Representative — Muschamp Textile Machinery Ltd., Keb Lane Bardsley, Oldham, Eng.



283-8

FOR THE TEXTILE INDUSTRY'S USE—

ning frame requirements and is available in right or left hand assemblies for either aisle or underframe mounting. The company's lint proof motor is recommended to complete the spinning frame drive.

(Request Item No. I-2)

Absorbent Finish For Synthetics

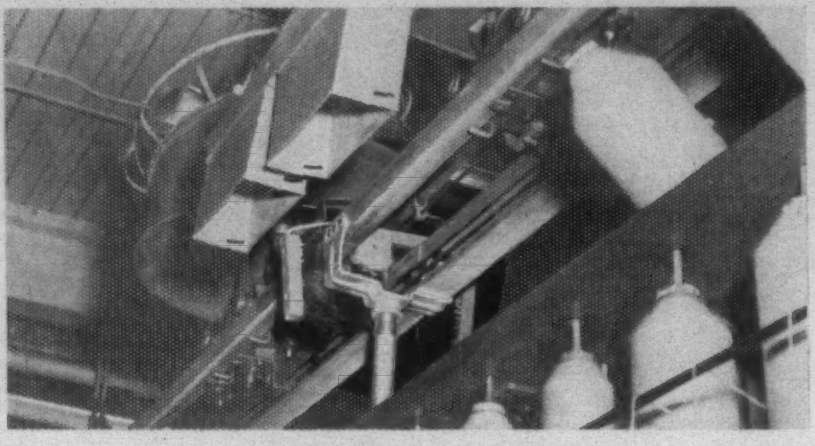
A new finish designed to produce greatly increased wearing comfort and desirability of fabrics made of synthetic fibers is being introduced by Scholler Bros. Inc. The finish, to be known as Hysorb, reportedly renders synthetic fabrics absorbent through the effect of a wicking action when moisture makes contact with the fabric surface, resulting in the dissipation of the moisture instantly. The finish has been under development by the company for several years.

Readily applied in conventional equipment and by recognized methods, Hysorb is reported to have affinity to almost all man-made fibers, making application comparatively simple.

In addition to the absorbency advantages, Hysorb is said to give fabrics an exceptionally fine hand. Because of the added ability to take on moisture, Hysorb-finished fabrics of man-made fibers are said to take on a new, natural feel, a new-found skin compatibility that adds wearing comfort to a marked degree. Fabric that is normally mo ture-resistant now "breathes," permitti the absorption of perspiration as well aiding in the evaporation of skin moistu

Durability of the new finish is larg dependent upon the type of washing age used; milder-type detergents are reco mended. For all garments that are typi against-the-skin wear (lingerie, underwe shirts, blouses, etc.) hand washing or m chine washing with detergents will assu acceptable absorbency retention, the co pany points out. It was further stated th examination of Hysorb-treated fabric aft repeated wash-and-dry cycles, revealed n harshening of hand and that the pleasi surface of the original finish was retaine

(Request Item No. I-3

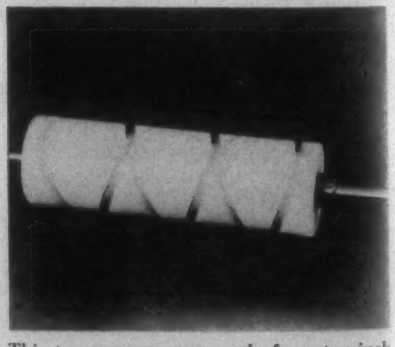


3-Way Web Control

A new triple-action automatic web con trol unit named the Web Master is now available from Mount Hope Machinery Co. The unit is designed to simultaneously prevent misalignment of fabric edges, eliminate wrinkles and prevent loss-of-width. Control is partially effected by the over-all spreading action of two rubber-covered rolls with axles having short, rigid portions and with flexible end portions. The curvature of the end-sections of the rolls varies automatically in response to a sensitive finger edge alignment on each selvage. The resultant combined control action reportedly keeps the web smooth, at full length, with both edges aligned. The Web Master provides fast, positive control for all types and weights of open-weave textile fabrics and throughout the processing of tire cord fabric. Models are available to meet all production requirements and web tensions up to 10,000 lbs. across the roll.

(Request Item No. I-4)

Nylon Spindle Cams



This traverse cam was made from two-inch Polypenco extruded nylon bar stock.

Working to reduce the noise level of its traveling spindle winder, Abbott Machine Co. replaced steel traverse cams with identical cams machined from Polypenco Nylon 101 2" O.D. extruded rod. The desired improvement in noise reduction was achieved, plus an additional dividend in increased output and package improvement.

The cams were machined from extruded Polypenco Nylon 101 bar stock manufactured by The Polymer Corp. No production problems were encountered as the extruded bar stock is machined with standard

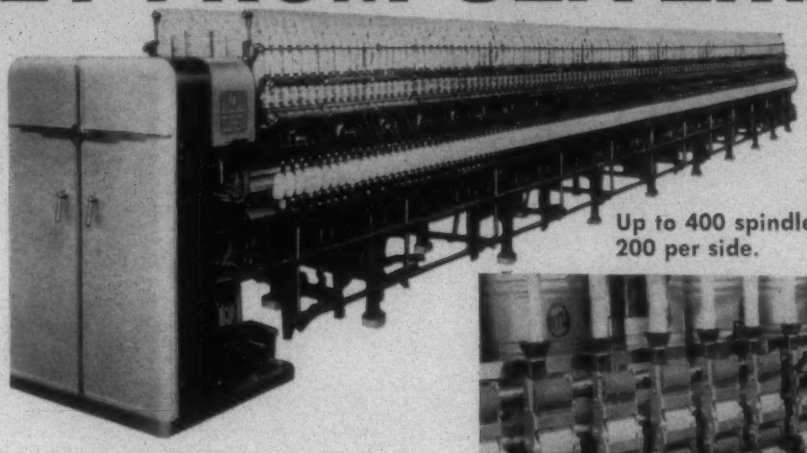
BOOTHS 245-6 — MAIN FLOOR
1958 SOUTHERN TEXTILE EXPOSITION

OM-S SUPER HIGH DRAFT SYSTEM

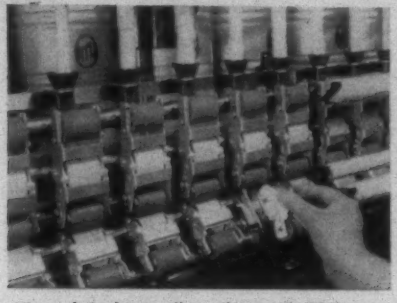
SPINS 12's to 120's

DIRECTLY FROM SLIVER!

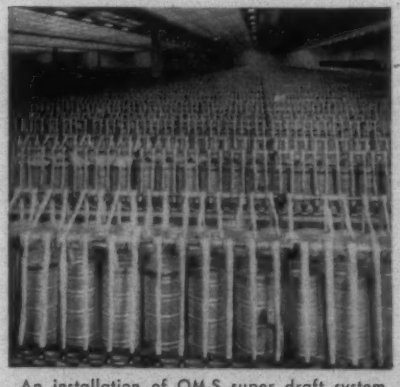
Completely Eliminates Roving!



Up to 400 spindles, 200 per side.



View of drafting roll cradles on OM-S frame. Note easily removable *self-weighted* cradles.



An installation of OM-S super draft system. Note *height* of sliver guide roll: only 5 feet from floor!

1. The OM-S produces superior quality yarns directly from drawing sliver — 5% to 10% stronger than conventionally spun yarns.
2. The OM-S handles cottons and synthetics up to 3″ in staple length.
3. The OM-S is in successful operation in several U. S. mills some of which have already re-ordered full installations.
4. The OM-S complete system costs less than a conventional frame.
5. The OM-S is installed and serviced in North America by reputable erectors.
6. The OM-S is precision engineered and ruggedly built by one of the largest textile machinery manufacturers in the world.
7. The OM-S is currently in use throughout the world, including the United States, to the extent of over 650,000 spindles.
8. The OM-S system includes an automatic can filling, sliver cutting and can doffing mechanism for drawing frames.
9. The OM-S has numerous advanced features and is available for large-package spinning with increased sliver can capacity.

With no other spinning system can you duplicate the better quality, lower operating cost and savings in floor space and investment offered by the OM-S.

Investigate now!

Send for additional literature on the OM-S. Ask us to run a demonstration or test. Request a quotation on an initial installation.

Address all inquiries to Edward S. Rudnick,

Exclusive North American Sales Represensatives

Edward S. Rudnick, Representatives

OLYMPIA BLDG., NEW BEDFORD, MASS.

(District Salesmen in strategic territories)

Daiichi Bussan Kaisha, Ltd.

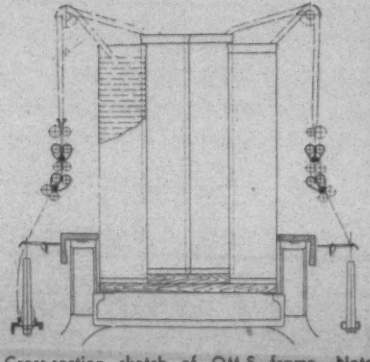
Exporter — TOKYO — NEW YORK — *Importer*

(World-wide Representation)

O-M Spinning Machine Manufacturing Co., Ltd.

OSAKA, JAPAN

(More than 5,000,000 O-M Spindles in use throughout the world)



Cross-section sketch of OM-S frame. Note arrangement of rollers and sliver cans, 2-sided frame.

FOR THE TEXTILE INDUSTRY'S USE—

metalworking equipment. The new cam is more expensive than the steel, for even though the nylon rod can be machined at much higher feeds and speeds, this does not completely offset the higher material cost.

Field installations have reported immediate increases in yarn speeds as much as 40% in some mills. Machines that were run at 625 yards a minute are reportedly producing better packages at 875 yards a minute. Many factors stemming from the new nylon cams contribute to this improved operation: (1) Since the noise level is drastically reduced, the noise level at increased operating speed is less than the former slow speed; (2) The lightweight nylon cam accelerates to its top speed more rapidly and uniformly, forming a more homogeneous package; and (3) The inertia of the 1½-lb. nylon cam is considerably less than the old 5-lb. steel cam. There is less slippage between the cam drive tire and the power roll at the start of winding after the package makes the turn.

The long-range benefits of these new nylon cams will not be as dramatic but, nevertheless, should be significant, the company reports.

The savings in cumulative weight will vary with every machine and its effect will vary with every mill. In an average machine of 145 spindles, the 3½-lb. differential per cam means a savings of the power required to drive this quarter-ton of cam at top speed.

Individually, the lighter bearing load should increase the bearing life, but this will be directly influenced by any increase in operating speed. The nylon cam equipped winders have not seen sufficient service to adequately predict any improvement in bearing life. But, lighter loads, less slippage and uniform acceleration are all factors that usually contribute to improved bearing performance, it is reported.

A further investigation is being conducted on the feasibility of redesigning the head with permanently sealed bearings. Since lubrication is no longer needed for the cam and traveler, yarn spoilage can be reduced by eliminating the oil completely. With no oil to be changed periodically, servicing time will be reduced.

(Request Item No. I-5)

Pigment Padding Colors

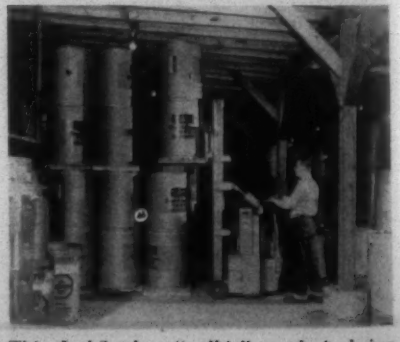
The Hilton-Davis Chemical Co. has made available a line of pigment padding colors that is said to have demonstrated a high level of performance in all textile fibers. The new line, called Skytone, supplements the company's pigment printing colors. The latter consist of the Seabond line, an oil-in-water phase system, and the Hiltone line, a water-in-oil phase system.

Skytone padding colors are offered in a complete selection of brilliant shades. In addition to ease of application, Hilton-Davis says tests have shown they are economical by effecting lower dyeing costs. The new padding colors are also reported to have exceptional fastness properties, and are compatible with drip-dry finishes. They can be used with all textile fibers, Hilton reports. (Request Item No. I-6)

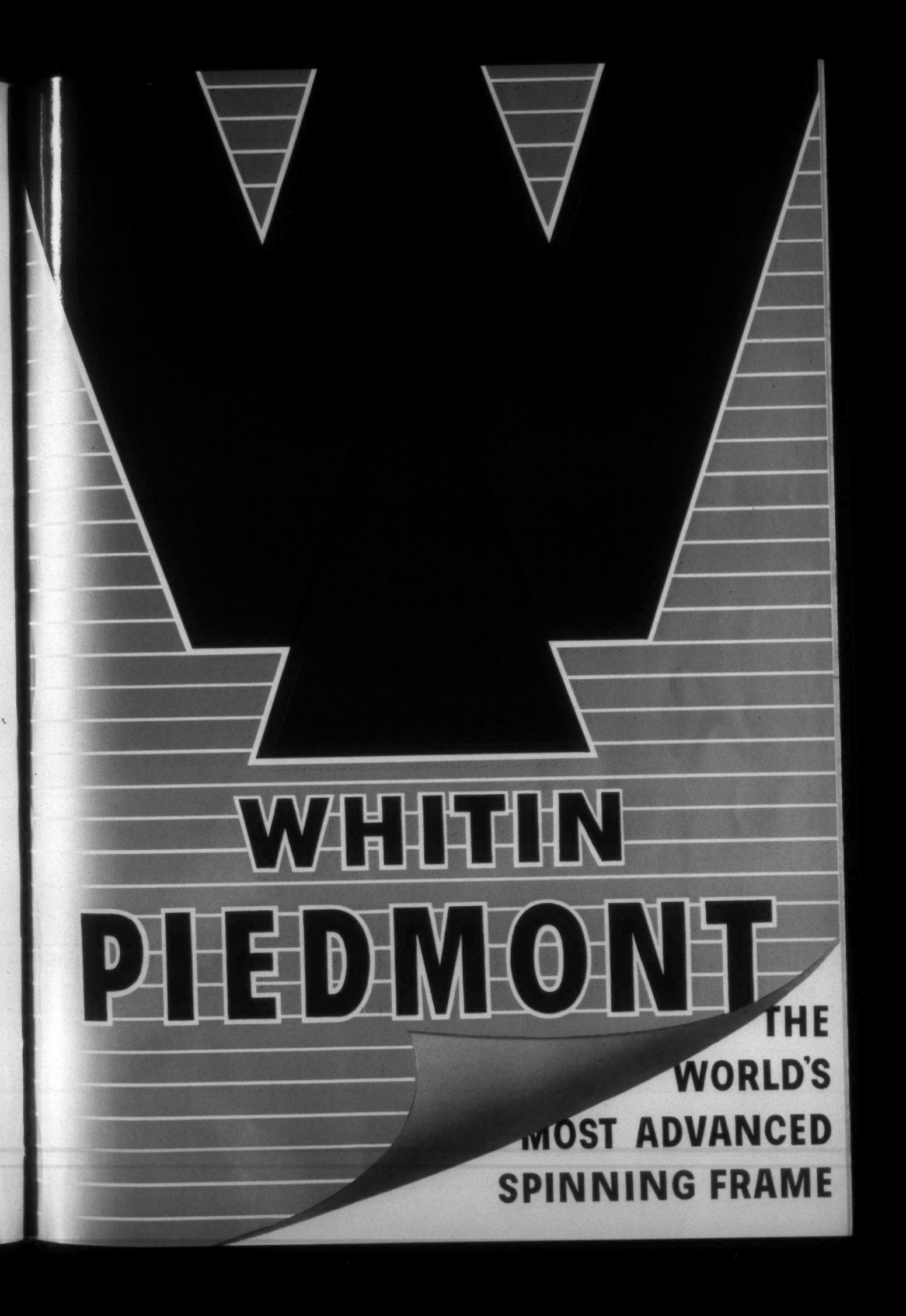
"Walkie" Truck

High stacking loads in minimum aisle space is now said to be possible with a compact, counterbalanced-type JackStacker "walkie" truck developed by Lewis-Shepard Products Inc. This truck, which has a 1,000-lb. capacity, has an over-all length of just 63¾" with a 24" long load. The truck will maneuver and high stack goods in aisles as little as 5' 10" wide with a 24" long load.

Especially recommended for situations where operating space is at a premium yet where the features of a counterbalanced-type truck are desirable, the truck is said

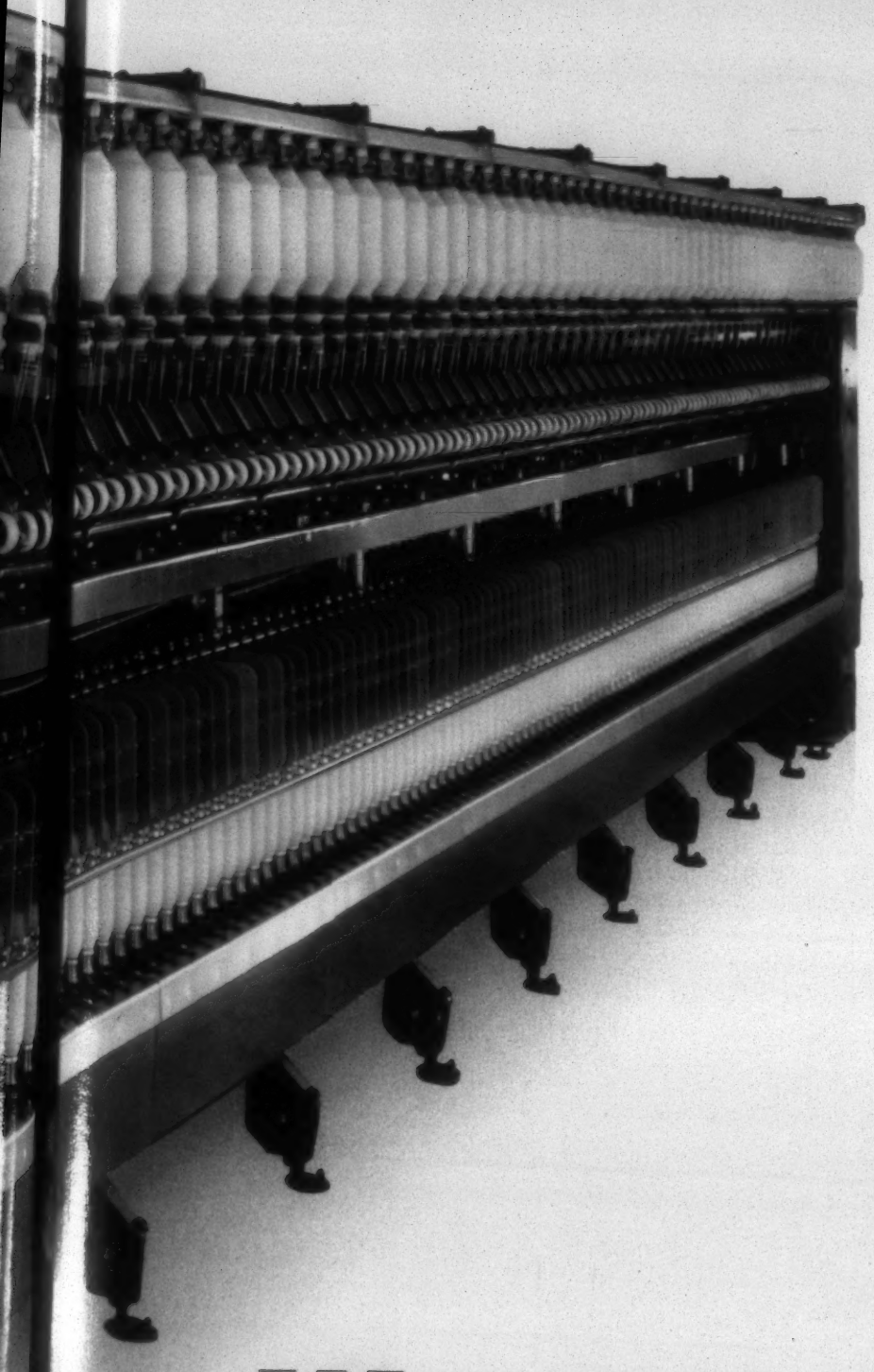


This JackStacker "walkie" truck is being introduced by Lewis-Shepard Products Inc.


WHITIN
PIEDMONT
THE
WORLD'S
MOST ADVANCED
SPINNING FRAME

WHITIN presents th

the PIEDMONT



TODAY'S MOST EXCITING NEW SPINNING FRAME

It's "top secret" no longer! Here's the great new PIEDMONT, the world's most advanced Spinning Frame — this triple triumph of Whitin research, engineering and manufacturing is the most functionally efficient Spinning Frame yet developed.

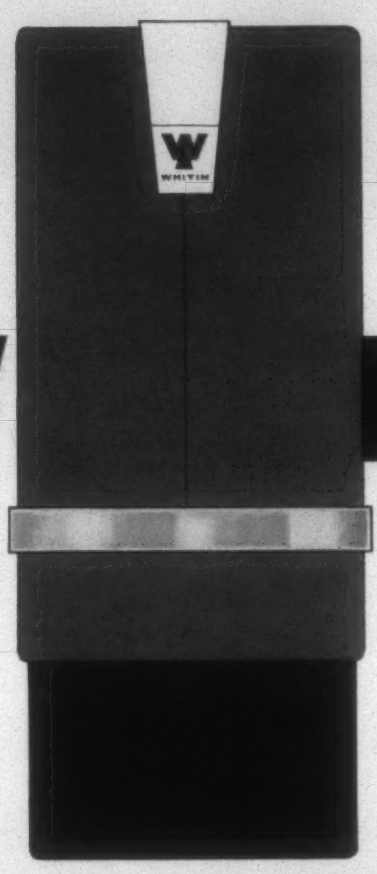
Bold in concept and dramatic in design, this slim-trim beauty is not just another narrow frame nor another compressed conventional frame — but an entirely new frame. It is new from floor to creel, from its sleek, feature-filled head end to the smartly concealed cooling unit in the foot end. Its classic lines are a tribute to the styling genius of Raymond Loewy Associates.

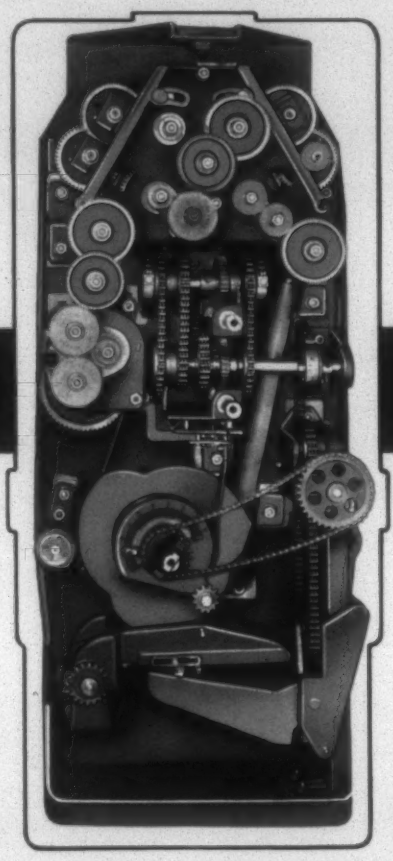
Cleverly compact — it's only 27" wide — the PIEDMONT has, among a score of features, individual spindle drive, straight-line spinning, scientific balloon control system, ingenious builder motion and simplified gearing. Seldom, if ever, has a single new machine offered to the industry such a wealth of opportunity for more profitable operation through increased production and better quality at lower costs.

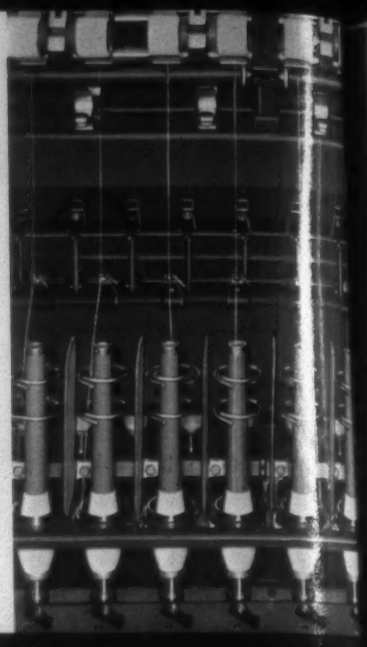
W The great new PIEDMONT will be in operation in Booth 804 at the 20th Southern Textile Exposition, Greenville, S. C., October 6-10. We will be delighted to show it to you.

Every spinning frame improvement desired by mill men is incorporated into the PIEDMONT. Its new and unique features herald a new epoch in spinning for the future!

Send for complete information now.







Straight line spinning and two scientific balloon control rings

Modern styled head end and attractive color combination

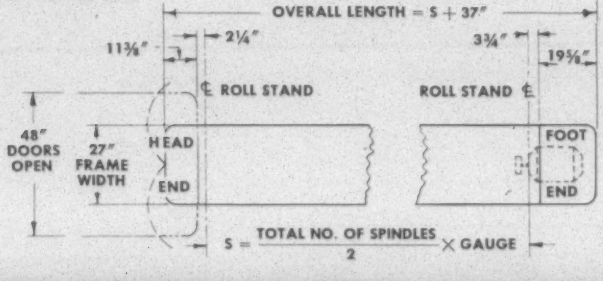
Simplified gearing and new builder are entirely enclosed in head end

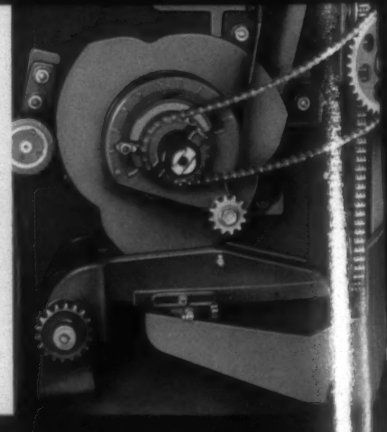
Spindles individually driven from a side shaft by an endless belt

SPECIFICATIONS: OVERALL FRAME WIDTH 27″; TRAVERSE UP TO 12″; MOTOR – SOFT START, ENCLOSED CONVENTIONAL H.P.

GAUGE	3½″	4″
SPINDLES	UP TO 288	UP TO 240
RINGS	UP TO 2½″	UP TO 3″

FLOOR PLAN OF WHITIN PIEDMONT SPINNING FRAME MODEL "K"





PIEDMONT SPINNING FRAME

New builder motion, easy to adjust, provides a better built bobbin

WHITIN MACHINE WORKS WHITINSVILLE, MASS.

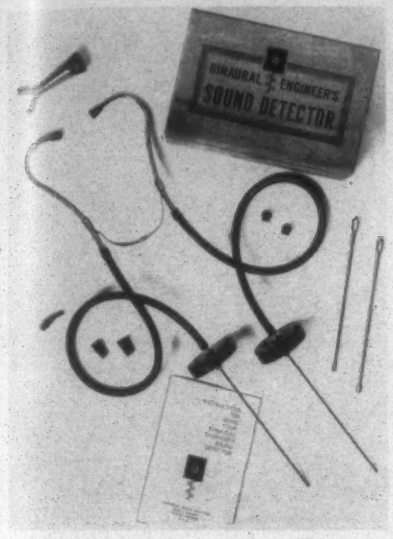
CHARLOTTE, N. C. · GREENSBORO, N. C. · ATLANTA, GA. · SPARTANBURG, S. C. · DEXTER, ME.

PTD. IN U.S.A. FORBES, BOSTON

FOR THE TEXTILE INDUSTRY'S USE—

to be lubricated for life, eliminating periodic lubrications. It is operated from a control handle while walking along with it, thus its designation as a "walkie" truck. All controls, including brake, traction, lifting, lowering and tilting, are centrally located in the handle. (Request Item No. I-7)

Machine Defect Detector



Jenkins Metal Shops has been named distributor in the South for sound detector equipment made by Burke & Co.

Sound Detector is said to locate the smallest internal defects in moving machinery without shutting down or otherwise taking equipment out of service. A portable detector amplifies normally inaudible defect-caused noises and helps the user to accurately locate broken, loose, worn or bent parts in gear boxes, compressors, pumps and similar equipment, regardless of size. It is also said to be useful in determining the efficiency of steam traps and for locating leaks in air, gas or liquid lines. Burke & Co. reports that the product utilizes dual detectors to transmit sounds to one or both ears as desired. Each detector contains both a pick-up diaphragm and an amplifying diaphragm to provide maximum sound vibrations. The twin detector feature makes it possible for the engineer or maintenance man to listen to two different points at the same time, thus defects are quickly and accurately pinpointed. Jenkins Metal Shops is the distributor for seven Southern states.

(Request Item No. I-8)

Stapling Machine

The Container Stapling Corp. has announced the development of Model G stapler which is said to close 1,100-lb. test triple or double wall boxes for as little as one cent. The power tool is said to set-up the bottoms of empty boxes just as cheaply.

Staples come in 7/8, 1, 1 1/8, 1 1/4 and 1 3/8" leg lengths. The unit uses any ordinary

air line supplying 60 to 80 p.s.i. It is furnished with lubricator and air filter. An automatic water trap eliminates down-time for trap drainage.

(Request Item No. I-9)

Emulsifier For Mineral Oil

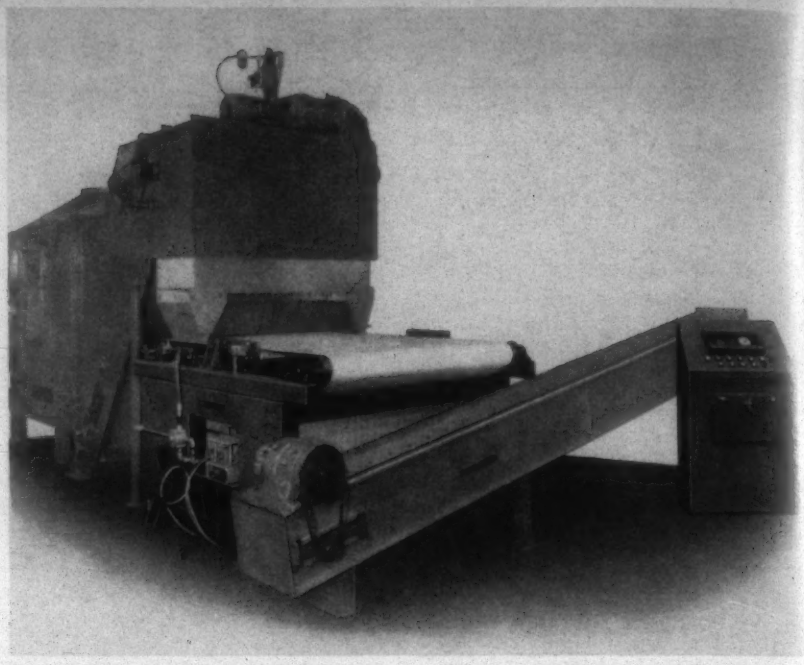
A new cationic emulsifier for mineral oil has been developed by Emkay Chemical Co. Called Emkabase CA, the emulsifier is a bright oil which can be mixed with ten parts its own volume of mineral oil to produce a bright mixture, dispersible in water. Because of its substantive nature, water dispersions of Emkabase CA and mineral oil will exhaust onto many surfaces, fibers and fabrics, Emkay reports.

(Request Item No. I-10)

Controlling Weigh Belt

A new standard controlling weigh belt for improved accuracy of feed rate for light-weight materials such as cotton linters and textile fibers has been introduced by Proctor & Schwartz.

The belt is designed to be used in conjunction with the Proctor Feeder for feeding various types of low density, relatively lightweight products. The unit will control the rate of feed with a guaranteed accuracy of plus or minus 1% of maximum scale reading, according to the firm.



Proctor & Schwartz is now offering this new standard controlling weigh belt for use in conjunction with the Proctor Feeder.

The Proctor Controlling Weigh Belt incorporates a constant-speed, chemically inert, lightweight conveyor arranged to continuously and automatically weigh the amount of material passing over it. Any variance in weight is immediately transmitted to the feeder control and the feeder speed is adjusted to maintain the preset rate of product feed.

The belt may be used without an auxiliary feeding device and the rate of delivery indicated by a digit integrator or a chart type recorder.

(Request Item No. I-11)

Scarlet Base

An improved form of the Scarlet G Base has been developed by The Hilton-Davis Chemical Co. and made available to the textile dyeing industry under the name of Hiltonil Fast Scarlet GC Base. A major distinction between the two bases, according to Hilton-Davis, is that the new form diazotizes far more rapidly and easily than the Scarlet G Base. This property of Hiltonil Fast Scarlet GC Base enables it to produce clear diazo solutions free from tars and impurities. Additionally, it provides more complete coupling and, consequently, more uniform dyeing and brighter shades.

(Request Item No. I-12)

Automatic Stop On Continuous Roll Feed

An advanced safety and convenience stopping feature is now available with new continuous roll feed units manufactured by the Mount Hope Machinery Co. As the let-off roll runs out, a photoelectric mechanism triggers braking action which prevents

SEYCO QUALITY • SEYCO SERVICE

TEXTILE CHEMICALS FOR ALL NATURAL AND SYNTHETIC FIBERS

SEYCO Warp Sizes—Compounds carefully blended to meet requirements for softening, lubrication, adhesion; adding where needed antiseptics, anti-foams, anti-sticking agents.

SEYCO-WAX—Specially blended natural and synthetic waxes for slashing and finishing.

SEYCO SYNCOTE—Surface lubricants for weaving of synthetics.

SEYCO-PEN—Wetting agents, penetrants and dye assistants for all dyeing conditions, including vats and sulfur dyes. Nonionic and anionic. Levellers and retardants.

SEYCO-TERGE—Liquid, flake and solvent-blended detergents and scouring agents.

SEYCO-BRITE—Kier and bleaching assistants, for production of maximum whiteness and absorbency.

SEYCO-MERCE—Mercerizing assistants, both cresylic and non-cresylic bases; plisse penetrants.

SEYCO-VEL—Softeners to produce any variety of hand: full, raggy, surface-smooth. Anionic, nonionic, cationic.

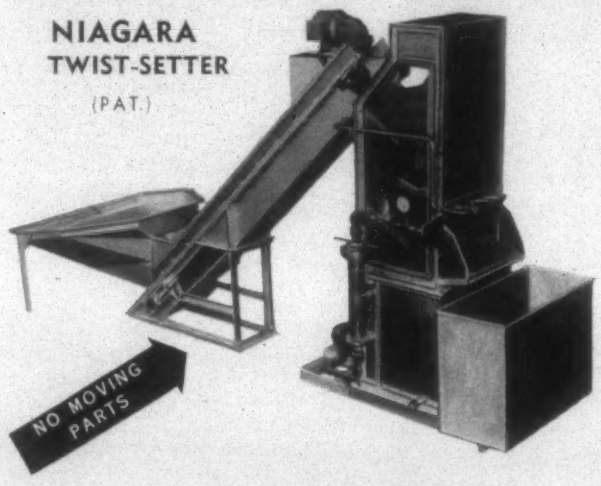
SEYCO-LUBE—Fiber and yarn lubricants for cotton, rayon and synthetics.

SEYCO-SAN—Agents and finishes for production of Sanforized cloth.

SEYCOL—Soluble finishing oils and softeners.

SEYCO Products for yarn conditioning, rewetting, absorbency, cord polishing, shuttle dressing, sequestrants, etc.

NIAGARA TWIST-SETTER (PAT.)



The NIAGARA TWIST SETTER, having no moving parts inside the machine, has practically no upkeep cost. Can condition 3,000 pounds per hour of filling on bobbins. Minimum space required.

SEYCO WARP LUBRICATOR

The SEYCO WARP LUBRICATOR mounted on the slasher frame gives a uniform surface application of oil or wax lubricants which materially improve weaving efficiency.

WRITE FOR FREE TECHNICAL BULLETINS

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Walt Whisnant, ST 2-5816

Gastonia, N. C.
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Greensboro, N. C.
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A. Welling LaGrone, CE 5-3993

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SEYDEL-WOOLLEY & CO.

748 RICE STREET, ATLANTA, GEORGIA

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SEYCO

coasting of the nip rolls and motor, thus stopping the end of the cloth from running through. The new device is designed to eliminate the dangerous practice of trying to stop cloth manually. In addition, Mount Hope points out, less operator attention is required when a new roll is about to be sewed on. Other features of safety and ease of operation cited for the new feature include:

(1) A jog button which permits easy unwinding of the remaining yard or two of cloth on the let-off rolls.

(2) A warning light to let the operator know that the power is on and that if the nip roll motor has stopped it will start again when the cloth level control calls for more cloth in the scray.

(3) A nip roll release lever automatically cuts out the motor when the rolls are denipped, allowing the operator to safely thread through the nips or pull the cloth back for sewing.

(Request Item No. I-13)

Durethene Polyethylene Film

Lowell Bleachery Inc. of St. Louis, Mo., is making wide use of Durethene polyethylene film to solve three of its most difficult operating problems. The film, a product of the plastics division of the Koppers Co., is used by Lowell as a room divider, as covers for bleaching vats, and as covers for large skids.

Because of its outstanding qualities as a moisture and dust barrier, polyethylene film is used as skid covers for fabrics by Lowell Bleachery, St. Louis, Mo.

As a room divider, the film serves as a temperature barrier between the Sanforizing room—where the temperatures are maintained at approximately 140° F.—and an adjacent work area. In addition to minimizing the heat problem, the clear film also transmits light, making the use of additional lighting fixtures in each area unnecessary.

Lowell uses the polyethylene film as a vat cover during bleaching operations to prevent the evaporation of costly bleaching chemicals and to eliminate the possibility of discoloration of fabrics only partially submerged near the surface of the vat. The chemical action of strong bleaches does not effect the film in any way.

Used as skid covers, the reuseable film reportedly offers excellent protection against moisture damage and dust, particularly where fabrics must be stored for any period of time. (Request Item No. I-14)

Metallic Yarn

A new metallic yarn, specially designed for its soft hand and exceptionally high yield, has been developed by Metlon Corp. Known as Superfine, the yarn is a Mylar quality foil lamination, with all the important advantages of the company's metallic yarns of this type, accepting both vat and yarn dyeing and being resistant to carbonizing, vulcanizing and mercerizing. It carries the Certified Washable Seal of the American Institute of Laundering.

It is believed that the new yarn will fulfill a great need in the manufacture of apparel fabrics of all grades, since its increased softness and pliability answer a demand for an ever more gentle hand. With its reported exceptionally high yield and excellent characteristics, it is said to be more economical on a yardage basis than any previous foil type metallic yarn.

Metlon reports that Superfine fabricates extremely well in fine jacquards and sheers and is also being used in knitgoods, where it can run easily on all types of circular and flat machines. It is particularly perti-

OOK TO THE MOST ADVANCED DEVELOPMENT IN THE INDUSTRY
EST IN HOME LAUNDERING! BEST IN COMMERCIAL LAUNDERING

CHLORDARE-E®

By Far – The Most Advanced Wash-and-Wear Resin With Exceptional Resistance to Chlorine Bleaching and Yellowing!

At last, a production-perfect resin that's proved highly efficient for wash-and-wear cottons. With CHLORDARE-E there is little or no degradation in cotton fabrics due to retained chlorine in either multiple home or commercial launderings and bleachings. CHLORDARE-E gives highest crease resistance, with even better shrinkage control, thus producing cotton fabrics which will stay fresh-looking longer, eliminating pressing and washing worries. However, CHLORDARE-E does have the great advantage of being able to withstand moderately hot ironing when necessary. Send for our technical data on CHLORDARE-E. This is the answer to your wash-and-wear cotton problems.

CHEMICALS METRO ATLANTIC DYESTUFFS

METRO-ATLANTIC, INC.

Main Office: CENTREDALE, R.I.
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Foreign Branches: GRANBY, QUEBEC; HAVANA, CUBA
Sales Promotion Office: 10 EAST 39th STREET, NEW YORK, N.Y.

nent for lingerie sheers and undergarments. The yarn's increased yardage and softness reportedly do not detract from its strength. It can be woven directly from the spool and no supporting yarn is needed.

(Request Item No. I-15)

Lap Control System

The Long lap control system, a pneumatic innovation which puts production and quality control in picker machinery for textile mills, is now being produced in England by the world's largest group of textile machinery manufacturers. Manufactured by Textile Machinery Makers Ltd., the English-made lap control system will be sold by the firm under license in all countries except the U. S.

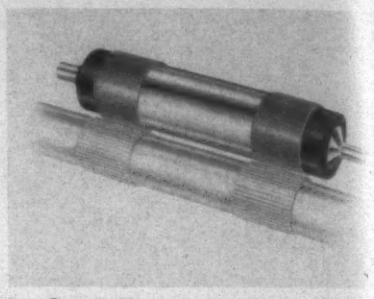
Livingston & Haven Inc. of this country holds exclusive world-wide rights to the four-year-old device. Developed by John R. Long of Shuford Mills at Hickory, N. C., the pneumatic lap control system is said to eliminate as many as 34 moving parts in the conventional "counter section" of picker machinery.

In the U. S., Deering Milliken Co. was the first large textile chain to convert pickers to the Long system wherever applica[ble]. Up to the present, there are now in op[eration] ation about 80 Southeastern and N[ew] England plants using these devices.

Engineering as well as on-the-job tes[ting] have indicated that the Long system [will] allow mills to produce 90-lb. to 10[0-lb.] (or any practical size) lap. This sy[stem] will also turn out higher quality laps [and] will reduce maintenance to a minim[um], the company reports.

(Request Item No. I-[16])

New Drafting Element



Saco-Lowell Shops is introducing this new MagneTrol pressure system for obtaining roll pressure in the drafting element.

Saco-Lowell Shops has announced the development of a completely new system of obtaining roll pressure in the drafting element. Called the MagneTrol, the system uses magnetic top rolls in the drafting element. Saco-Lowell points out that the magnetic force produces the required pressures, thus doing away with all auxiliary equipment for applying top roll pressures. The MagneTrol system also does away with all lubrication in the drafting zone, Saco-Lowell points out.

"The elimination of lubrication; the exceedingly few component parts; and the more efficient cleaning action of the clearer makes any drafting element with MagneTrol the cleanest ever developed," Saco-Lowell reports. (Request Item No. I-17)

Yarn Tension Meter

Fidelity Machine Co. is introducing a n[ew] yarn tension meter scaled from 0.5 [to] 3 grams.

What is said to be the first accurate yar[n] tension meter reading from 0.5 to 3 gram[s] to be available at reasonable cost has been introduced by Fidelity Machine Co. The result of joint development by Fidelity en[gi]

New..."M" type HERR Conical Ring

better lubrication with less oil

SEAM LUBRICATION. A new idea . . . utilizes the principle of capillary attraction to provide more uniform lubrication than has been possible in the past. It is the outstanding feature of the new "M" type ring.

SEVERAL YEARS EXPERIENCE IN SOME OF THE LARGEST TEXTILE PLANTS HAVE ESTABLISHED THE BENEFITS OF THIS RING.

See us at the Southern Textile Exposition — Booth 267

1. **LESS OIL IS USED IN THIS NEW "M" TYPE RING** because no oil is wasted. It all goes to the bearing surfaces of the ring through the seams.

2. **TRAVELERS LAST LONGER.** As a matter of experience in mills which have been using "M" rings for the past three years, the uniformity of lubrication increases traveler life.

3. **RINGS LAST YEARS LONGER.** High speed operation for years has established the superiority of the new design.

4. **CLEANER YARN.** With better oil distribution and no leakage, mills are getting cleaner yarns.

5. **FASTER OPERATION.** Speed-up is possible without extra wear to ring and traveler. The traveler receives oil from the lubricating seams over the complete bearing surfaces of the ring.

6. **REDUCES YARN BREAKAGE.** As in all Herr Conical Rings, tension is automatically adjusted by the action of the traveler and conical design of the ring.

Write today — get facts that will make new profits possible.

The 5½" diameter 43/64" face Herr Conical Ring requires only one oil cup.

HERR® MANUFACTURING CO., INC.

312 FRANKLIN STREET • BUFFALO 2, N. Y.

FOR SPINNING AND TWISTING WORSTED, WOOLEN, RAYON, NYLON, ORLON, FIBERGLASS AND BLENDED YARNS OF ALL TYPES

gineers and N. Zivy and Cie, S. A., of Switzerland, the new meter is designed for single hand use in checking and controlling yarn tension under load during spinning and winding operations. Precision sensitivity of the meter permits its use with the finest yarns. Fidelity has been appointed exclusive world-wide sales and service representative for the new meter. The meter, packed in an individual case, is priced at $75, f.o.b. Fidelity Machine Co.

(Request Item No. I-18)

Retarding Agent

Ciba Co.'s Retarder A is a retarding agent that causes Orlon and Acrilan dye to be held in the bath through the early stages and then released at a uniform rate through the remainder of the dyeing cycle, thus permitting good exhaustion of the dye bath.

By the application of Retarder A, more uniform and level dyeings are said to be possible from lot to lot, thus rendering optimum money value from each pound of dye used.

Rapid exhaustion of the dye is reported curbed when additions are made to the dye bath by means of the retarding agent. This enables the dyer to match shades with confidence that the results will not be streaky or blotchy.

Retarder A may be used with basic or cationic dyes when dyeing Orlon 42 and Acrilan 16. The recommended percentages dependent upon depth of shade are 2-3 (owf) for pastel shades and less than 1 for heavy shades.

(Request Item No. I-1

For the Mill Bookshelf

Textile Pulley

Reeves Vari-Spin drive textile pulley for use on spinning frames is described in Bulletin G-586-1 recently released by the Reeves Pulley Co., division of Reliance Electric & Engineering Co. The pulley is said to be adjustable in seconds while the frame is operating.

It is said to have just 4 component parts, making for easy assembly, installation and service. The compact unit is available in right or left hand assemblies. Send request on company letterhead.

(Request Item No. I-20)

Fork Truck

A new 4-page bulletin providing complete operating and design specifications on its Model F-45T3, 3,000-lb. capacity electric-powered fork truck has just been published by The Elwell-Parker Electric Co.

The literature contains detailed truck specifications along with basic truck dimensions and turning diagrams. Operating pictures and basic details about the design features of the Model F-45T3 are also included. (Request Item No. I-21)

Cationic Dye Leveler

New information on a dye leveler for acid colors on nylon tricot and wool has been released by Nopco Chemical Co. Called Nopco 1425-B, the product is a liquid cationic surfactant that levels acid dyestuffs (including milling and premetallized acids) as well as direct and vat colors.

Described in data bulletin TX-34, Nopco 1425-B helps to prevent the cause of barre marks on unevenly dyed nylon. It also saves stripping costs when used to correct over-dyed lots. (Request Item No. I-22)

Chemical Resistant Finish

A new technical bulletin, "The Chemical Resistance of Astonized Finish on Synthetic Fabrics," has been released by the Onyx Oil & Chemical Co. The bulletin describes various tests made in the Onyx laboratories using the company's Astonized finish on samples of nylon, Dacron, Orlon and Dynel. Complete technical data concerning the test results are included.

Expected applications for the Astonized chemical-resistant finish are on laboratory coats, work suits and other apparel used in occupations where chemicals and flammable solvents present a hazard. The anti-static properties of this finish are said to enable man-made fabrics to provide greater wearing comfort. Send request on company letterhead. (Request Item No. I-23)

Floor Matting

A new brochure which is said to enable maintenance men to compute the savings effected by the installation of floor matting has been produced by the American Mat Corp. (Request Item No. I-24)

Steel Strapping

A new pocket-size complete catalog, SSS-209, containing all the product information on standard and heavy duty Stanley steel strapping and on Stanley strapping hand and power tools, accessories, Colorgraph strapping and lithographed seals is now available from Stanley Steel Strapping, division of The Stanley Works. The new catalog is organized for quick reference and is illustrated with helpful tables and suggested applications which show the seven ways to use steep strapping.

(Request Item No. I-25)

Basic Switch Catalog

Micro Switch, a division of Minneapolis-Honeywell Regulator Co., has published an enlarged, 32-page edition of its Basic Switch Catalog, No. 62c. Significant innovations in basic switches for industrial and commercial applications have been added to make this catalog more useful to the user of basic switches.

Among the new switches in the revised catalog are the high-precision roller lever switch, which has extreme stability of characteristics; the adjustable actuator switch for convenient fine adjustment; and the "pulse" switch, which offers a means of securing electrical impulses without need for complicated actuating mechanisms.

Micro Switch "coin" switches are also included. This low-torque switch finds wide use in applications where operating force is very low. New mounting brackets and auxiliary actuators for Micro Switch basic switches have also been added.

(Request Item No. I-26)

Direct Dye Guide

A new Direct Dye Guide has been developed by American Cyanamid Co. to assist dyers in the successful use of direct dyes. The chart categorizes 93 direct dyes that build up, decompose or remain stable under certain dyeing conditions. It tells the dyer at a glance what additives to use, what temperatures to select and how to keep spoils and seconds down. American Cyanamid points out that direct dyes are widely used because of their relatively low cost and good fastness properties. One disadvantage, their irregular behavior, may now be overcome more easily with the aid of this guide, according to Cyanamid representatives. (Request Item No. I-27)

Straddle Carriers

Field Report No. 11-A-07, available from industrial truck division, Clark Equipment Co., describes how a cotton warehouse in Texas utilizes four straddle carriers to move bales of cotton 2½ miles from warehouse to dockside for shipping. The 2-page report details the procedures by which bales are loaded, transported and unloaded at dockside. Savings effected over the previous method, a tractor-and-train system, are indicated. Four photographs illustrate various steps in the operation.

(Request Item No. I-28)

Deaerating Heater

An informative 6-page bulletin filled with specifications and diagrams of its SSC Deaerating Heater is now available from the Graver Water Conditioning Co. It contains complete information on this 2-stage

spray type packaged heater which comes complete with internal vent condenser of stainless steel and all controls and valves in capacities ranging from 2,800 lbs./hr. Units from 16,000 lbs./hr. and up were recently introduced by Graver and the first comprehensive information available on them is contained in this bulletin.

The booklet explains the SSC, its operation and design characteristics. It gives detailed diagrams of how the SSC fits into various boiler feed systems. A chart covering all size units from No. 1 through 16 gives sizes, dimensions, space requirements, weights, storage and a great many other facts. The back of the bulletin contains complete specifications on the SSC.

Graver's SSC Deaerating Heater is a small, compact unit designed specifically for smaller plants where reduction of corrosion and pitting in boiler tubes, condensate return lines and accessories must be accomplished in the most economical way. The low initial cost, minimum maintenance and limited headroom requirements of the SSC make it ideal for such use.

(Request Item No. I-29)

A-C Polyethylene

A new 16-page booklet has been issued by Allied Chemical's Semet-Solvay Petrochemical Division on the use of emulsifiable A-C Polyethylene 629 as a textile finishing agent. According to Allied, the brochure contains all the information needed by a textile chemist to adapt emulsifiable A-C Polyethylene to his particular process.

Listed in the brochure are product properties, instructions on the preparation of emulsions, suggested formulations, notes on how to manufacture large-scale batches, and applications methods. Also included are tables covering effect of the emulsion with crease-proofing resins, effect of the emulsion on natural and synthetic fibers, and tear strength, durability and scorch resistance on treated cotton.

Now employed commercially by the textile industry, the new emulsion is said to improve the following properties in fabrics: hand, tear strength, crease recovery, abrasion resistance and faster sewing rates.

(Request Item No. I-30)

Feedwater Equipment

A technical paper entitled "Feedwater Equipment Designs and Methods" is available from Graver Water Conditioning Co. This paper, Technical Reprint T-161, discusses in detail the two main methods of treating boiler feedwater for industrial applications: hot process-hot zeolite and demineralization.

The latest developments in the design of equipment and components for the two treatment processes are cited throughout and typical case histories of equipment application are described. Of general interest is the discussion of recent advances in the high pressure field which tells what is happening in the utility industry and how treatment methods have been affected by recent developments. The article is illustrated with a flow diagram and charts.

(Request Item No. I-31)

Serving The Textile Industry

Louis P. Batson Co. Named Agent For William Tatham

The Louis P. Batson Co., Greenville, S. C., has been named exclusive agent in the U. S. for William Tatham Ltd., Belfield Works, Rochdale, England, manufacturer of carding equipment. Tatham manufactures wool carding machinery, machinery for the manufacture of nonwoven textiles, machinery for the manufacture of absorbent cotton, and complete machinery for condenser yarn, or yarn made from cotton waste, and yarn for the carpet industry.

Increased Unifil Sales Reported By Universal

A rapidly broadening usage of the Unifil Loom Winder system of filling preparation is being evidenced, according to Universal Winding Co., Providence, R. I., through the recent receipt of substantial orders from mills who have been operating evaluation quantities over the past year. Several textile companies are now installing sufficient quantities of Unifils to fully equip their entire weave rooms.

Mills who have placed orders for additional Unifils in the past few weeks include Cone Mills Corp., Burlington Industries, Dover Mill Co. and West Point Mfg. Co. While the majority of Unifils ordered to date have been for installation on looms weaving filament and spun synthetic fabrics, more interest has been shown recently in Unifils for application to cotton looms. The units ordered by Cone Mills, for example, will be applied to looms weaving cotton fabrics.

Universal expects that by the end of the year some 45 mills in the U. S. will have Unifil installations in operation.

Eastman Chemical Offers New Dye Service Plan

As a result of a recent study into the problems of color-fastness control in the textile industry, Eastman Chemical Products Inc. has announced a new dye service plan designed to aid dyers, converters and manufacturers in establishing and maintaining positive standards of color fastness for the piece-dyed acetate fabrics they handle. Called the Eastman Plan for Specification Dyeing, the new service is intended to establish the "missing link" in the control of color fastness of piece-dyed acetate fabrics between the converter, manufacturer and the dyer.

Key to the new Eastman plan is a comprehensive testing service to be carried out at the company's dye service laboratories in Lodi, N. Y., and Kingsport, Tenn. Under the plan, converters and manufacturers are encouraged to specify the precise degree of color fastness required for their particular markets in terms of the number of gas cycles, Fadeometer hours or other standard test established by the A.A.T.C.C. These minimum requirements may apply to a given quality of fabric, or for an entire line if used in a single trade.

To achieve the control proposed by the plan, the dyer and the converter must first reach an agreement regarding minimum fastness requirements. At this point the dyer arranges with Eastman for the necessary testing service and, as each lot of fabric is dyed, forwards a sample of the fabric to the nearest Eastman dye service laboratory where the specific tests are performed. A complete report is furnished to the dyer or, at the dyer's request, to the converter including test swatches, dye lot numbers and all other necessary identifying information. This test report becomes the basis for the converter approving shipment of the fabric lot or acknowledging its acceptance.

The Eastman plan is designed to eliminate uncertainty about color fastness, a factor which has been a traditional hazard to converters of piece-dyed acetate fabrics. With a laboratory report in hand for each dye lot, the converter would have visual evidence that each lot is up to specifications.

Werner Textile Consultants Moves Into New Quarters

Convenience of Southern textile executives doing business in New York was given as one of the major reasons for the relocation and enlargement of the New York offices of Werner Textile Consultants, one of the leading consulting firms in its field. The move to the new quarters, formerly occupied by the finishing division of Cone Mills in the Lowenstein Building at 1430 Broadway, is being made this month. For the past 18 years Werner, with offices in New York City, Larchmont, N. Y., and Atlanta, Ga., had maintained its New York office at the Lincoln Building, 60 East 42nd Street, opposite Grand Central Terminal.

Turbo To Exhibit At Manchester Show

Turbo Machine Co., Lansdale, Pa., will exhibit a scale model of its Turbo Stapler at the International Textile Machinery Exhibition in Manchester, England, October 15-25. Turbo Staplers reduce pre-roving operations to a minimum and simplify drawing because sliver is even and parallel. This results in less capital expense for machinery, and means less space and less skilled labor. Synthetic fibers processed by the Perlok system on Turbo Staplers spin into yarns of exceptional evenness with a perfect balance of loft and bulk. The sliver is more even because it is made from uniform tow. There are no co-terminal fibers. Staple length can be controlled to match natu fibers which means better blends. Tur reports that some 50 spinners in this cou try are using Turbo Staplers to achieve hi bulk or loft. Only a few simple adjustmen are necessary to regulate the degree of he stretch, control the degree of crimp, a control staple length. The stapler adap to all acrylic fibers. Adjustments can b made on the machine for different fiber deniers, staple lengths or crimp.

Saco-Lowell Named Agent For Drying Equipment

Saco-Lowell Shops, Boston, Mass., has been named exclusive agent in the U. S. and Canada to sell, service and manufacture textile drying equipment designed by Fleissner & Sohn of West Germany.

Fleissner & Sohn, one of the oldest established textile machinery builders in Europe, dating back well over 100 years, today specializes solely in the manufacture of drying equipment. In addition to the parent factory in West Germany, a new plant is now in operation in Bradford, England. The firm's new patented air suction drum dryers have proved of such advanced design that numerous progressive mills in the U. S. have already installed the new equipment, Saco-Lowell points out.

The Fleissner air suction drum dryer is used for drying all types of raw stock and loose fibrous material, including top, tow, nonwoven fabric and knitted goods—in fact, any fabric not requiring tentering. It is said to be especially suitable for processing knitted goods. The final shrinkage of knitted goods processed through the Fleissner dryer reportedly compares very favorably with results obtained with tumbler-type dryers. It dries more efficiently, economically, and at much higher rates of production.

The Fleissner design replaces conventional low production conveyor equipment requiring much more floor space, Saco-Lowell points out. Simple in design with few moving parts, this new drum dryer is said to be far less expensive to maintain from a cleanliness and repair basis. Simple drums replace the conventional belts, chains and other movable parts required in conventional dryers.

The basic unit of the Fleissner drum dryer system consists of two metal drums enclosed in steel framing. Depending upon the application, a number of units are combined to form an integral drying line with feed and delivery units especially adapted for the material to be processed. Drying is accomplished by air suction. The fiber or fabric to be dried is held onto the first drum by air suction for one-half of its circumference and then transferred to the second drum. The transfer causes the material to be turned over during passage

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1926 "IF IT'S PAPER" 1958

onto the second drum, and thereby obtains the very even drying which is one of the main advantages of the system. At all times there is 100% penetration of the drying air through the fiber. The drying air is brought through the fiber at high speed, passing through the fan and heating elements and back into the drying chamber. The recirculation of the air permits the economical use of extremely high air speeds, and therefore high production rates. The fiber is in the drying unit less than one-tenth of the time required by the conventional dryer, it is said.

Operational economy, based on the low steam consumption, is another major advantage. The Fleissner dryer uses approximately two-thirds of the amount of steam required by the usual dryer. 1.4 pounds of steam or less, including all losses, is said to be all that is necessary to remove one pound of water, compared to up to 4 pounds of steam on conventional equipment. The reduction in steam consumption is due, in part, to greater utilization of electrical heating energy. The Fleissner air suction drum dryer, Saco-Lowell reports, is the only machine which will guarantee final moisture content within plus or minus 2% without using automatic control and less than 1% with automatic control. The Fleissner suction drum dryer evaporates three times the quantity of water per square foot of drying surface compared to any other drying system. Thus, it saves floor space and reduces to an absolute minimum any heat losses. Four major advantages are:

(1) Constant outgoing moisture content.

(2) Extremely short cleaning periods for dryer.

(3) Low steam consumption.

(4) Drying periods generally between one and three minutes.

A number of Fleissner installations are already in operation in this country. Saco-Lowell will have one of the units in operation at the Southern Textile Exposition in Greenville, S. C.

Glyco Products Co. Merges With Chas. L. Huisking Co.

Glyco Products Co. Inc., producer of chemicals for the textile and other industries, is now the Glyco Chemicals Corp., a manufacturing and sales subsidiary of the Chas. L. Huisking & Co. Inc., a leading merchandiser and manufacturer of raw materials for the pharmaceutical industries. Under terms of the acquisition, which went into effect August 22, Glyco continues to produce and market products for the textile industry at its Williamsport, Pa., plant.

Crawford Named Agent For Chro-Lon Belting

The H. E. Crawford Mill Supply Co., High Point, N. C., has been named sales agent in the South for the Charles A. Schieren Co.'s line of leather-nylon belting known as Schieren Chro-Lon belting. The Worcester, Mass., firm will offer transmission engineers as well as the Crawford sales force to assist mills with their belting problems.

Johnson-Atlantic States Installs Teletype System

The jointly operated Johnson Motor Lines-Atlantic States Motor Lines has begun service with its newly installed automatic teletypewriter system which inter-connects its 23 terminals and New York sales office with the company's headquarters at Charlotte, N. C. The company points out that it is the first common motor carrier operating between the East and the South to provide this type of written communication system for its customers. The new system is a two-circuit, 75-words-per-minute teletypewriter system providing instantaneous communication between all locations on the Johnson-Atlantic operations by means of address codes pre-punched in teletypewriter tape. As tape is transmitted, the desired receiving station is selected automatically by the sequence selector. Polling of terminals and sales offices is continuous with no waiting period between cycles.

Hilton-Davis Opens New Greenville Center

The Hilton-Davis Chemical Co. has officially opened its modern research and sales distribution center for textile dyestuffs in Greenville, S. C. The new facility consists of some 20,000 square feet of building space allocated to laboratory, warehouse, shipping and administrative functions. The technical service laboratory, outfitted with the latest equipment, is designed to work in close co-operation with textile mills in solving individual color problems. A feature of the large warehouse is a huge "cold storage" vault to keep dyes fresh. An average of 750,000 pounds of dyestuffs will be stored in the warehouse for quick delivery. The building also contains a large mixing room where the company's Spectrosols, a line of stabilized diazo printing compounds, are custom-made to mill requirements. S. Y. Stribling III is manager of the new center.

National Starch Opens New Plant In England

National Starch Products Inc. has opened a new plant at Slough, Bucks, England, for the polymerization of a wide range of polyvinyl acetate emulsions. To be operated by National Adhesives Ltd., a National Starch subsidiary, the new plant will provide a center for research and technical service facilities for emulsion technology in Great Britain. At the same time it will encourage the free exchange of new developments in these fields between National's British technologists and the company's research and development personnel in the U. S.

Eastman Launches New Polyester Fiber

Eastman Chemical Products, a subsidiary of Tennessee Eastman Co., reports that its new polyester fiber, Kodel, will appear for the first time commercially next Spring. The firm pointed out that additional facilities, scaled up from the pilot plant, are now either installed or in process, and that these units will be able to furnish commercial quantities of the new fiber in increasing amounts. Some of the features cited for Kodel include resistance to pilling, heat resistance, covering power, hand, ease of processing and ready dyeability. Eastman also says that the properties of Kodel will permit production of fabrics in which polyesters have not previously been used.

SERVING THE TEXTILE INDUSTRY——

Fabrics produced on the woolen system can now be made in Kodel and wool blends in a wide range of weights, including tropicals. Eastman states also that the fiber makes possible high quality sheen gabardines in blends with wool, heavier weight fabrics such as flannel types in blends of the new fiber with wool or in blends with rayon, and heavier worsted type suitings of the new fiber blended with wool. Initial production of the fiber will be in staple form, with filament coming at a later date. Its greatest use is expected in blends with other fibers. Current plans are not to introduce the fiber in any new fabrics containing less than 50 per cent Kodel.

E. F. Houghton To Open Southern Plant In Georgia

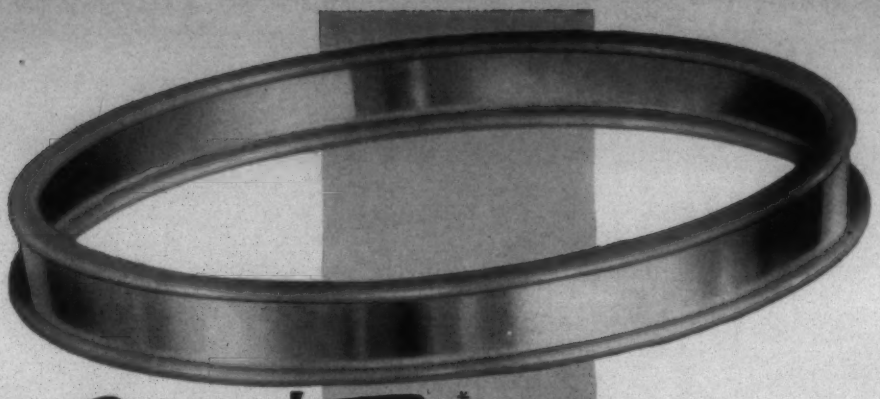
An industrial property on a five-acre plot in Carrollton, Ga., near Atlanta, has been acquired by E. F. Houghton & Co., Philadelphia, Pa., in another step in its long-range program of expansion of service to Southern industry. Buildings will be modernized and enlarged for use as a manufacturing and warehousing facility, with equipment to be installed for blending, compounding and treating industrial oils and chemicals for textile processing. Houghton has long supplied warp size compounds, softeners, wool oils and surface active agents to the textile industry. Location of this new plant in the heart of Georgia will speed up deliveries and provide convenient stocks.

Arnold, Hoffman Expands Laboratory Facilities

Arnold, Hoffman & Co., with headquarters in Providence, R. I., is discontinuing its technical service work at Teterboro, N. J., and expanding its laboratories in Providence and Charlotte, N. C. Laboratory equipment and technical personnel at Teterboro have been transferred to Providence where more efficient use can be made of the specialized equipment. Expansion of the Charlotte facilities enables it to handle continuous dyeing processes, textile printing and resin and non-resin finishing in addition to usual routine services.

New Engraving Firm Founded By Apponaug

The Apponaug Finishing Co., Apponaugh, R. I., has incorporated its photo engraving department as the Apponaug Roto-Graving Co. The new corporation, which will retain its present location in Apponaugh, will produce engraving copper rolls or cylinders for textile printers, specializing particularly in the photo engraved reproductions of continuous tone and continuous repeat color separation designs. Officers of the new company include Robert M. Johnson, president, and Robert Powers, production manager. Johnson has been affiliated with Apponaug for more than 20 years.



The Speed-Tex* RING
by SACO-LOWELL

A Revolutionary Development in Ring Design! Offers the SHORTEST Breaking-in Period of Any Ring!

The Saco-Lowell Speed-Tex ring offers the shortest breaking-in period of any known ring. It retains all outstanding Pawtucket qualities — ultra-smooth finish, close tolerances, long life.

The final finish of the Saco-Lowell Speed-Tex ring is obtained at low temperatures which do not soften the initial case hardness of the basic steel ring. A softer ring would break in satisfactorily, but would have a short life.

Actual mill tests show only 4 or 5 traveler changes are required for complete breaking in, compared to 50 to 100 traveler changes for conventional style rings. The Saco-Lowell Speed-Tex will give consistently, ring after ring, high traveler speeds, the longest life, and the shortest breaking-in period of any ring available today.

TYPICAL INSTALLATION

Yarn, Warp—20.5's
Ring Size—3" Diameter
Spindle Speed—9,000 RPM
Traveler Speed—7,069 FPM
Traveler—Victor No. 2/0-X2D-191 HRW

Traveler changes during breaking-in period:

No. 1— 1 hour
No. 2— 20 hours
No. 3— 48 hours
No. 4— 96 hours
No. 5—120 hours

SACO-LOWELL Speed-Tex MODEL 01C

Higher Traveler Speeds Than Ever Before!

This exclusive Saco-Lowell ring reaches a new high in large package spinning speeds. Special flange contours permit traveler speeds never before attained. The inner flange, bearing surface of the traveler, is full width to provide a wide, steady traveler path. The outer flange, not a true bearing surface, has been sharply reduced in width.

A wider traveler may be used without changing its total weight. The increased width results in better traveler balance, more stable operation and superior running conditions. More bearing area and uniform pressure reduces traveler wear.

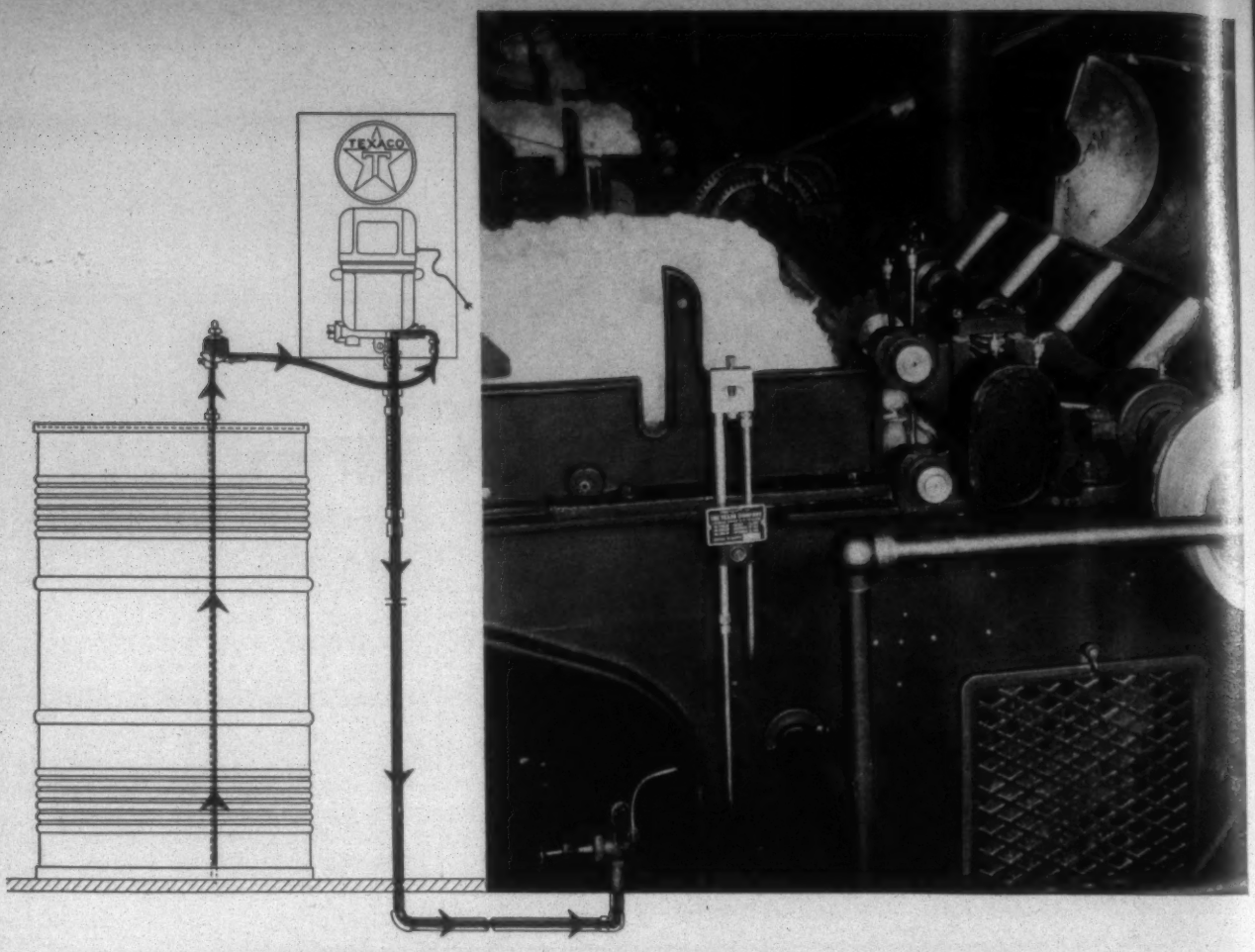
The Model 01C Speed-Tex has all of the advantages of other Speed-Tex rings — the shortest and most economical breaking-in period of any ring available.

COMPARATIVE MILL INSTALLATION DATA

Mill A — 25's Warp Yarn — Frame—SG-3D Gwaltney	
Model 01C Speed-Tex	Conventional Ring
Ring Size—2½" Diameter Spindle Speed—11,500 RPM Front Roll Speed—154 RPM Traveler Speed—7,500 FPM Traveler—Victor No. 4/0-X3D-89-HRW	Ring Size—2½" Diameter Spindle Speed—10,200 RPM Front Roll Speed—136 RPM Traveler Speed—6,700 FPM
Mill B — 24.75's Warp Yarn — Frame—SG-3D Gwaltney	
Model 01C Speed-Tex	Conventional Ring
Ring Size—2½" Diameter Spindle Speed—11,500 RPM Front Roll Speed—168 RPM Traveler Speed—7,500 FPM Traveler—Victor No. 3/0-X3D-89-HRW Break-in Schedule: No. 1—30 minutes No. 2—24 hours No. 3—48 hours No. 4—72 hours No. 5—96 hours Traveler Life—96 hours	Ring Size—2½" Diameter Spindle Speed—10,600 RPM Front Roll Speed—156 RPM Traveler Speed—6,950 FPM

*Patent applied for

PAWTUCKET SPINNING RING DIVISION
CENTRAL FALLS, RHODE ISLAND
SACO-LOWELL SHOPS
60 BATTERYMARCH STREET, BOSTON 10, MASSACHUSETTS
Shops at BIDDEFORD & SACO, MAINE; SANFORD, N.C.; EASLEY, S.C. Sales Offices: CHARLOTTE · GREENSBORO · GREENVILLE · ATLANTA



INCREASE TEXTILE PROFITS

Use Texspray fiber conditioner. You'll get smoother, stronger yarn and fabric

Here's how Texaco Texspray can favorably alter your production picture:

- **It reduces fly and dust so that machines and men operate more efficiently.**
- **It increases the pliability of textile fibers.**
- **It assures more long staple by preventing fiber breakage, thus maintaining full saleable weight.**
- **It reduces static, assures fewer "ends-down" and faster Monday start-ups.**

Texspray may be applied in the picker directly to the fiber surface with a wiping action and treats all fibers uniformly.

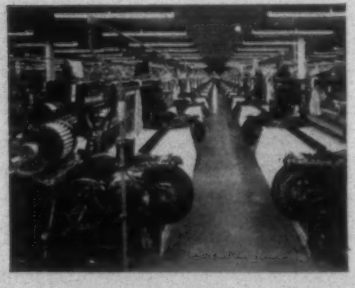
Texspray-ed fabric can be dyed or printed without prior washing. Texspray does not interfere with color values; therefore, its added weight need never be removed.

How to obtain a trial Texspray installation

Just call the nearest of the more than 2,000 Texaco Distributing Plants in the 48 States, or write:

☆ ☆ ☆

The Texas Company, 135 East 42nd Street, New York 17, New York.



Want cleaner cloth?

Lubricate looms—cam surfaces, jacks, slide and connecting rods—with Texaco Stazon. It clings to lubricated parts—does not splatter, creep or drip.

LUBRICATION IS A MAJOR FACTOR IN COST CONTROL

(PARTS, INVENTORY, PRODUCTION, DOWNTIME, MAINTENANCE)

textile bulletin

VOL. 84 SEPTEMBER 1958 NO. 9

The Twentieth Southern Textile Exposition

Greenville, S. C.

THE 20th Southern Textile Exposition will be held Oct. 6-10 at Textile Hall in Greenville, S. C. More than 300 exhibitors will be on hand, representing virtually all the major manufacturers of textile machinery, equipment and supplies. To help you get the most out of your visit to the show, the following list of exhibitors and their booth numbers is presented along with a brief description of what they plan to display. A reproduction of the Textile Hall floor plan is also included to help you locate particular exhibits. In instances where some exhibitors are occupying more than one booth, only the lowest booth number is given in the listing. Textile Hall will be open from 9 a. m. to 6 p. m. throughout the week.

Abbott Machine Co. 814
Greenville, S. C.
(1) A 12-spindle radial quiller, capable of running 3 or more different yarn counts simultaneously. (2) A new type slub catcher. (3) A 52-spindle automatic cheese winder, winding both 4¾" and 6" traverse cheese packages. (4) A 40-spindle standard automatic Model II quiller.
S. L. Abbott, W. L. Perry, L. S. Ligon Sr., L. S. Ligon Jr., S. A. Roane, E W. Skinner, A. P. Apple, F. L. Hendricks.

Abington Textile Machinery Works 829
North Abington, Mass.
(1)) The latest complete Abington vacuum card stripping system for revolving top flat cards with Abington B4 exhauster, surge control valve, automatic remote controlled bottom discharge receiver, underfloor-type piping connections to nozzles on a producing card, feed throw-out, throw-in, doffing rolls and automatic piece-up. (2) Abington hand knotters.
John W. Burbine, W. W. (Pete) Brame, M. R. Bradley, Sumner Smith Jr., Francis J. Richardson, Oliver H. Ramo.

Acme Steel Co. 517
Steel Products Division
Chicago, Ill.
(1) Model E41 electrically powered strap feed unit which feeds the band around large containers. (2) Model A4 steel strapper which tensions, seals and cuts band with power. (3) Model E33 steel strap dispenser, a lightweight band dispenser.
G. R. Easley, D. C. Jorgensen, M. M. Brown, J. B. Farr, E. H. Jones, E. S. Lumpkin, J. N. McLean, C. E. Paul, J. B. Quarles, J. H. Scott, S. F. Woodley, R. M. Snodell.

Acme Steel Co. 341
Fabricated Materials Division
Chicago, Ill.
(1) A metal slotted angle, an all-purpose framing material used for building shelves, bins, racks, dollies, carts, tables, etc.
W. B. Bender, M. G. Niergarth, R. H. Lovelace.

Here's A Preview Of The Biggest Textile Exposition The South Has Ever Seen

Adams Inc. 451
Greenville, S. C.
(1) The Adamstop stop motion for roving frames. (2) A new development not yet announced.
S. J. Adams, J. B. Adams, Cecil Adams, L. A. Deal, E. Frank Walter, W. A. Dean, L. L. Rook, Thelma Took.

Addressograph-Multigraph Co. 362
Cleveland, Ohio
(1) A variety of multilith offset machines demonstrating the 3-color process, automated systems of production order writing and automated systems of order invoice writing. (2) Addressograph Models 1955, 200 and 30 demonstrating the mechanical writing of inventory and the inexpensive mechanical writing of names, addresses and data. (3) Graphotype Model 350 for the embossing of metal addressograph plates.

Akron Spool Mfg. Co. 432
Akron, Ohio
(See R. E. L. Holt Jr.)

Aldrich Machine Works 269
Greenwood, S. C.
(1) New pneumatic lap compression system. (2) A Lummus filter for cleaning and returning dusty air from opening machines, pickers, overhead condensers, nappers, cloth brushers or shears. (3) A Lummus all-steel blending feeder followed by tandem Pepper Shaker openers and a conventional feed table for picking up the cotton from these openers.
A. P. Aldrich Jr., W. D. Wornall, Ben R. Morris, B. Gales McClintock.

Allen Beam Co. 101
New Bedford, Mass.
(1) Warper beam. (2) Loom beam.

The Greenville Show——

(3) Adjustable beam head. (4) Creel parts. (5) Warper parts.
Woodrow F. Tinsley, William L. Petersen, R. Udell Thornton.

Allen Bradley Co. 413
Milwaukee, Wisc.
Manual and magnetic motor starters and motor-control accessories.
H. G. Rosenkranz, L. P. Spoon, L. P. Spoon Jr., J. Lomax.

Allentown Bobbin Works Inc. 316
Allentown, Pa.
Bobbins and spools for the processing of fine denier yarns.
Henry W. Mack.

Allied Chemical Corp. 263
New York, N. Y.
(1) Textured Caprolan in yarns, fabrics and carpeting. (2) New efficiency yarn packages.
Daniel M. Holsenback Jr., Norfleet M. Gibbs.

Allied Producers & Supply Co. Inc. 301
Athens, Ga.
(1) Fiber treatments and spraying equipment. (2) Cloth spotter. (3) Floor finishes. (4) Paint and varnish removers and all types of cleaners.
Perron Shoemaker, Julian A. Rachels Jr., E. C. Walters.

Allis Chalmers Mfg. Co. 414
Milwaukee, Wisc.
Drives and controls and a close-coupled pump.
C. B. Rumble Jr., A. W. Robinson, T. W. McKee.

The Louis Allis Co. 504
Milwaukee, Wisc.
(1) Syncro-Spede synchronous a.c. induction motor built in standard N.E.M.A. frames. (2) Pancake short frame motor, a.c., radial air gap design. (3) Clean-Flo fan-cooled, enclosed textile motor, standard N.E.M.A. frames. (4) Adjusto-Spede a.c. adjustable speed drive.
Bud Becker, Alan Wiegrand, Paul Connell, Dick Read, Maurie Weitekamp, Jim Bodeker, Bob Overstreet, Jim Smith, Joe Moody.

Alvey Conveyor Mfg. Co. 515
St. Louis, Mo.
Pictures, drawings and blueprints of materials handling equipment and its use.
W. H. Oswald, L. D. Burdette Jr., C. S. Easley.

American Air Filter Co. Inc. 437
Louisville, Ky.
(1) Auto-Airmat automatic lint filter. (2) Electromatic electronic precipitator unit and panel type filters.
R. V. Matkin, Kirk Cousart, Tom Curlee.

American Crayon Co. 332
Sandusky, Ohio

American Lava Corp. 472
Chattanooga, Tenn.
Alsimag thread guides including new materials and designs.
J. B. Shacklett, W. M. Crittenden Jr., W. H. Cooper, J. S. Gosnell, J. W. Crisp, W. J. Geary.

American Moistening Co. 840
Providence, R. I.
(1) Operating Amco Heliclone loom cleaner. (2) Movie of a large loom cleaning installation in operation. (3) The Aero-Miser atomizer. (4) An automatic overhead beam handling unit. (5) A high capacity automatic floor sweeper. (6) A hand portable psychorometer. (7) A portable solution sprayer. (8) The new Amco atomizer test stand. (9) Evaporative cooling units. (10) No. 6 atomizer. (11) Blow-through valves. (12) Humidity controls. (13) Aspirating control station. (14) Dry duct unit (operating). (15) Sling psychrometers. (16) Model 35 self-contained humidifier.
W. A. Mullins, J. D. Johnson, J. H. Waldrip, J. E. Townsend, L. D. Terry, A. A. St. Germain, H. R. Rich, J. Anderegg, M. H. Irons, R. A. Hartley, J. Walmsley.

The American MonoRail Co. 111
Cleveland, Ohio
(1) New roving frame cleaner. (2) New Cable-Way power-driven overhead trolley conveyor. (3) Automatic cleaning systems for spinning frames and looms. (4) MonoRail type lap handling equipment. (5) Chainless type overhead power-operated conveyor.
C. L. Fell, L. R. McEachern, John Browne, V. W. Cook, H. J. Gleaton, E. H. Doerger.

The American Pulley Co. 212
Philadelphia, Pa.
(See Greenville Textile Supply Co.)

American Safety Table Co. 23
Reading, Pa.
(See Hollister-Moreland Co. Inc.)

American Stock Gear Division of Perfection Gear Co. 106-A
Harvey, Ill.
(See Ira M. Valentine)

America's Textile Reporter 225
Boston, Mass.

Anderson Printing Co. 274
Anderson, S. C.
(See Donald Hawthorne)

Anheuser-Busch Inc. Corn Products Department 513
St. Louis, Mo.
Corn products for the textile industry.
W. P. Hope, J. C. Aycock, T. Hampton Jr., K. Battenfield, L. Liebman, R. F. Amacher.

Armstrong Cork Co. Textile Division 816
Lancaster, Pa.
Armstrong Accotex NO-7876 bottom apron with specially compounded rubber on the outer surface to resist ozone and flex cracking and give the right fiber handling characteristics. Also a variety of textile products including spinning cots and aprons, weave room supplies, roll shop equipment, etc.
T. L. Hill, J. V. Ashley.

Armstrong Machine Works 443
Three Rivers, Mich.
(1) A glass model of Armstrong steam traps in operation showing how condensate is drained from textile machinery. (2) Armstrong steam humidifiers.
O. E. Ulrich.

Ashworth Brothers Inc. 122
Greenville, S. C.
(1) Card clothing for cotton, wool,

Make Your Plans Now To Attend The Greenville Show

The Greenville Show

orsted, synthetic, silk, rayon and as-
stos cards and for all types of nap-
ng machinery. Breaker clothing and
rd clothing for special purposes.
) Lickerin wire and garnet wire.
) Metallic wire for cotton, woolen,
orsted and synthetic cards. (4)
exible bend grinding. (5) Remilling
flats. (6) Reclothed flats. (7) Re-
othed lickerins.

R. C. Ashworth Jr., W. J. Flynn Jr., . Ashworth, T. C. Ashworth, F. L. rmitage, J. M. Reed, J. E. Seacord r., T. F. Hart, G. K. Grassmyer, . E. Johnson Jr., C. C. Withington r., W. G. Halstead, Ray Clary.

Askania Regulator Co. 117
Chicago, Ill.
(1) New Model 525 Twin Jet cloth guide for tentering frames and other applications. (2) New Model 558 cloth guide for light duty applications. (3) Light duty cloth let-out stand with integral hydraulic cylinder for automatic cloth guiding.
Frank Markey, Earl Schroeder.

Atkinson, Haserick & Co. 481
Framingham, Mass.
(Representing Plutte Koecke & Co.)
(1) Eichler Model UZ beam warper. (2) Eichler Model G2 warping creel.
Norman J. MacDonald, Maurice J. Lacey, F. E. Bozeman, H. H. Clinch, W. E. Stearns. Plutte Koecke: Messrs. Ungerechts and Haufler.

Atlanta Brush Co. 418
Atlanta, Ga.
Complete line of textile brushes including special purpose brushes.
William C. Perkins, George B. Snow, A. W. Dillard, Ansel McNeill, Jack Nelms.

Atlantic Gelatin 501
Division of General Foods
Woburn, Mass.
(See Ira L. Griffin & Sons)

B. & S. Machine Co. 275
Gastonia, N. C.

Bachmann Uxbridge 501
Worsted Corp.
Uxbridge, Mass.
(See Ira L. Griffin & Sons)

Bancroft Belting Co. 229
Boston, Mass.
(See Wilson F. Hurley)

Bahan Textile Machinery Co. 139-B
Greenville, S. C.
Looms, parts and assemblies.
W. H. Maulding, C. L. Greene, W. R. Rothrock, Paul Bahan, J. A. Sammons, W. L. Wilson.

The Bahnson Co. 830
Winston-Salem, N. C.
(1) Air-conditioning and humidifying equipment and air filters. (2) End collection for spinning frame and cleaning equipment. (3) Automatic doffing and material conveying. (4) Central heat removal.
Frederick Boxall, Agnew H. Bahnson Jr., Arthur E. Thomas, Grady Byrum, R. B. Crosland, R. W. Walters, Tom Elder, Ira Brown, J. G. Browning.

Barber-Colman 218
Door Division
Rockford, Ill.

Barber-Colman Co. 254
Textile Division
Greenville, S. C.
Type DD spooler which furnishes a cone-shaped package. The package is a 4° cone and will contain up to 6½ lbs. of yarn.
R. G. Ross, F. D. Taylor, L. L. Lideen.

Barreled Sunlight Paint Co. 223
Providence, R. I.
Engineered paints and colors for plant maintenance.
Henry A. Solie, John F. Crawley, Cecil L. Duffie, Elmer A. (Sonny) Barrett, Preston R. Singletary.

The Bassick Co. 411
Bridgeport, Conn.
Specialized casters with rubber, plastic and metal wheels.
A. J. Israel, E. P. Ripley, H. Bursley.

Louis P. Batson Co. 220
Greenville, S. C.
(See Batson Mfg. Co.)

Baston Mfg. Co. 220
Greenville, S. C.
(Representing Louis P. Batson Co., T. J. Murphy Fur Co., Roy Noble Co., World Dryer Corp.)
(1) Shur-Tuff dobby loop or stirrup. (2) Shur-Tuff turnbuckle harness adjustor. (3) Dobby or harness cords with airplane cable in the center. (4) Positive adjustment jack sticks for cam looms. (5) Shur-Cush vibration mounting for machinery. (6) All types of felts. (7) Plastic pickers. (8) Shuttle fur. (9) Warm-air hand dryers. (10) Static eliminators. (11) Laminated and plyed picker sticks, hold-up blocks, power sticks and crank arms. (12) All types of wood parts for textile machinery.
Louis P. Batson Jr., H. Elliott Batson, William J. Grant, Charles Carpenter, Harry Dannon, Joe Williams, Lee Shook, John P. Batson, David Murphy, Frank Hanscom, Red Ruwitch..

Edward H. Best & Co. 110-A
Boston, Mass.
(1) Pure gum rubber compressive shrinkage blanket. (2) New endless clearer. (3) Fabric samples.
John W. Hill, B. C. Yates, W. C. Hames.

Birch Brothers Inc. 248
Somerville, Mass.
(1) Model MF Supreme automatic greige room sewing machine. (2) Model 1237 laboratory padders. (3) The Coronation chain stitch piece end sewing machine. (4) Supreme butt-seam railway sewing machine. (5) Model 5 automatic cut-off winder.
Clifford W. Birch Jr., Richard Briggs, John C. Cosby.

Benjamin Booth Co. 468
Philadelphia, Pa.
(1) Micr-O-Grind equipment. (2) Supr-O-Tape condenser tapes. (3) Supr-O-Band spindle tapes. (4) Strip-O-Matic card clothing.
E. A. Snape Jr., E. A. Snape, Norman F. Bush, Charles G. Stower, William F. Crowder.

The Bouligny Co. 826
Division of R. H. Bouligny Inc.
Charlotte, N. C.
(See Coleman Co. Inc.)

Bowen-Hunter Bobbin Co. 212
East Corinth, Vt.
(See Greenville Textile Supply Co.)

Brainard Steel Division 463
Sharon Steel Corp.
Warren, Ohio
Strapping, strapping tools and accessories.
A. E. Bardwell, J. R. Jernigan, G. Boyd, J. D. Boyer, W. A. Garrett.

Browning Mfg. Co. 126
Maysville, Ky.
(1) Bearing units. (2) Wide range variable-speed spinning frame drives. (3) Quick release bases. (4) Flexible couplings. (5) Manual on power transmission equipment. (6) V-drives. (7) Poly V-drives. (8) Roller chain drives. (9) Paper pulleys. (10) Flexible couplings.
L. L. Browning, T. Frank Jones, E. A. Smith, H. B. Ives, M. D. Evans, R. V. Burton.

The Greenville Show

The Bullard Clark Co. 422
Danielson, Conn.
Loom supplies, including lug straps, check straps and strapping, pickers, picker sticks, dobby cords and anti-vibration pad material.
L. L. Froneberger Jr., Ralph M. Briggs Jr., Frank W. Beaver, Doyle Stansell.

Burlington Industries Inc. 432
Greensboro, N. C.
(See R. E. L. Holt Jr. & Associates)

Carolina Belting Co. 217
Greenville, S. C.
(1) Rusco Dacron harness strapping. (2) Heart-Of-Hide box plate leathers.
Charles F. Miller, C. T. Allen, Earle Davis, Dean N. Van Dyke.

Carolina Radio Supply Co. 320
Greenville, S. C.
Switches, industrial tubes, test equipment, relays, closed-circuit television, electronic components and batteries.
G. R. Sutton, A. D. Watson, J. H. Humphries, T. W. Lindsey.

Carolina Supply Co. 230
Greenville, S. C.
Reception booth.
H. W. Harrison, Claiborne Mardre, Jack Farrow, Broadus Ellertson, Ben Verdin, Frank Casey, Homer Stevenson, J. O. Crawford Jr.

Carrier Corp. 511
Syracuse, N. Y.
Rotaspray Weathermaker central air-conditioning device for accurate control of humidity and removing airborne contaminants.
R. S. Fullerton, William Walter, Walter S. Bornemann.

A. B. Carter Inc. 108
Gastonia, N. C.
(1) The Supreme plated traveler. (2) Boyce weavers knotter. (3) Spinning and twister travelers.
R. A. Haynes, W. L. Rankin, J. R. Richie, P. L. Piercy, D. E. Phillips, J. K. Davis, B. R. Link, J. B. Carter, E. Haines Gregg.

Cen-Tennial Cotton Gin Co. 824
Columbus, Ga.
(1) One-process opener-cleaner. (2) Separator-cleaner for discharging opener-cleaner. (3) Aerator for pre-opening and cleaning stock from the blending feeder. (4) Opener-blender for synthetics. (5) Blending feeder for cotton and synthetics.
S. K. Dimon, Allen Harmon, J. E. Brown.

Chandler Machine Co. 3[illegible]
Ayer, Mass.

Charlotte Mfg. Co. 1[illegible]
Charlotte, N. C.
Split-face top flats, card clothing, cylinders, doffers, top flats.
R. G. Spratt Jr., C. A. Spratt, R. [illegible] Bullard, A. D. Ennis, V. M. Whitley, Paul W. Scercy.

Clark-Cutler-McDermott Co. 45[illegible]
Franklin, Mass.
(See Yeomans Textile Machinery Co.)

Clark Equipment Co. 478
Battle Creek, Mich.
The new 2,000-lb. electric Clarklift fork lift truck, EC-20. Also gas fork trucks in the 3,000, 4,000 and 5,000-lb. capacities with carton clamp and cotton-boom.
B. E. Phillips, J. W. Kelly, Glenn A. Christians, Frank Lyne.

Clemson College School of Textiles 127-A
Clemson, S. C.
Display of knitting machines.
H. Betts Wilson, F. J. Leard, J. C. Williams and other members of the textile faculty.

Clinton Corn Processing Co. 205
Clinton, Iowa
Reception booth.
A. C. Junge, R. C. Rau, C. F. Cline, J. A. Tomlin, B. Estes, G. Henderson, G. Gilbert, E. F. Patterson, R. A. Conzett, Barbara C. Christopher.

Coats & Clark Inc. 221
Newark, N. J.
(1) Nylon travelers. (2) Nylon twisting tape.
R. H. Wilcox, T. B. Farmer, M. H. Cranford.

Cocker Machine & Foundry Co. 836
Gastonia, N. C.
(1) New Model GH 9-cylinder high

At Your Service

Staff members of TEXTILE BULLETIN will be on hand at Booth No. 203 throughout the Greenville Show to serve you in any way possible. Drop by for a chat or a favor. We'll be delighted to have you.

—The Greenville Show

speed cotton slasher. (2) New Model M3-55 32" multi-beam tricot warper and accumulator rolls. (3) Combination size storage and cooking kettle. (4) Model BW 40-C high speed cotton warper. (5) Horizontal creel. (6) Vertical creel. (7) Creel display and accessories.

John Cocker, John C. Bodansky, Don Shepherd, Hoyt Cunningham, Jim Etheredge, Frank Suggs, Orville Davis, John McCoig.

Colby Cooperative Starch Co. 501
Caribou, Me.
(See Ira L. Griffin & Sons)

The Coleman Co. Inc. 826
Greenville, S. C.
(Representing The Bouligny Co. and Yale & Towne Mfg. Co.)
(1) The new Yale KG51TL triplex mast fork lift truck. (2) Yale gasoline fork lift trucks with cotton clamps. (3) Yale electric and hand hoists. (4) Yale Rail King tractor. (5) Spinning frame showing the Bouligny Tru Draft system and umbrella creel.

Coleman Co.: J. P. Coleman, E. A. Brigham, E. C. Campbell, Hugh Stephens, M. R. Hawley. Yale & Towne: Lew Jones, R. H. Marsh.

Bouligny Co.: Louis Crawford, John Collins, Joe Glenn, Fred Beaver, Sam Walsh.

Collins Bros. Machine Co. 818
Pawtucket, R. I.
(See Karl H. Inderfurth Co.)

The Colson Corp. 485
Elyria, Ohio
(See Wrenn Brothers)

Continental-Diamond Fibre Corp. 465
Newark, Del.
Laminated plastic products and Diamond vulcanized fibre products, including bearings, gears, loom parts, trucks, boxes and roving cans.

F. M. Grauer, C. L. Simmons Jr., A. D. Gray, G. W. von Seth, C. B. Haynes, R. Little Jr., O. R. Thomas.

Cook Machine Co. 322
Subsidiary of Riggs & Lombard
Lowell, Mass.

Corn Products Sales Co. 445
New York, N. Y.
Reception booth.

A. N. McFarlane, A. A. Harden, J. M. Coe, Herman Baker, J. R. Hill, T. W. Blackwell, W. R. Joyner, H. L. Bailey, J. Alden Simpson, Earl G. King, Gordon E. Wood, J. M. Adcock, G. O. Greene.

Cotton-McCauley & Co. Inc. 833
Pawtucket, R. I.
(1) Cleanguide double apron support unit. (2) Cleanalign saddles, now pale green with positive adjusting and holding means at all points of adjustment. (3) Climax ball bearing top rolls. (4) Cleandraft non-lubricating nylon top rolls. (5) Easi-Creel bottom supported spinning creel. (6) Flexing changeover, spinning changeover.

Frank H. Cotton, Raymond L. McCauley, J. Bertram Howarth, Cecil A. McAbee, William L. Hinson, Lewis C. Burgin, Richard K. Butler.

Crabtree Textile Accessories Ltd. 321
Lancashire, England
(1) Telepathic compensator for seamless hosiery which controls hose length. (2) Universal yarn controller. (3) Sintox hard ceramic thread guides. (4) Satin and mirror finish chrome plated guides. (5) Crepeing flyers with new type nylon block. (6) Gate tensions and disc tensions, including ceramic types.

James B. Ashworth.

Crompton & Knowles Corp. 138
Charlotte, N. C.
(1) A C-7 automatic cotton dress goods loom with electric protection, special motor drive and paper indicated dobby, 53" between swords, 20 harness, 15/32" gauge, 4x1 box. (2) A PAPA loom, 82" between swords, 25 harness, 4x3 box. (3) A narrow fabric needle loom. (4) A dyehouse cloth truck.

F. W. Howe Jr., Albert Palmer, J. F. Molloy, R. S. Schedin, John C. Irvin, Raymond Sharpe, Lewis Burgess, Henry C. Wingard, Vernon O. Holcomb, Carnice Treadway.

Cross Sales & Engineering Co. 349
Greensboro, N. C.
(1) Motorized Zero-Max variable speed drives with speed range of 0 to 400 r.p.m. (2) Speed selector variable speed sheaves. (3) Warner electric brakes and clutches. (4) Twin disc fluid drives. (5) Thomas flexible couplings. (6) Revco variable speed drives.

William S. Cross, manager, D. O. Tise, Harvey Forrest, Harvey Hipp.

Curtis & Marble Machine Co. 235
Worcester, Mass.
(1) B-H cotton cloth inspector for

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50" goods in operation for fast inspection of large rolls. Take-up and let-off up to 36" in diameter. (2) M-125 cloth folder for 50" goods in operation. (3) VSS selvage trimmer with electric eye guiding, not operable. (4) LCP-S railway sewing machine for 60" goods in operation. (5) Portable detacker for woolen goods. (6) ONB-SC tacking head for woolen goods.

Walter E. Hildick, president, Walter F. Woodward, Jack Federline, Jack Stanley.

Cutler-Hammer Inc. 460
Milwaukee, Wisc.
A variety of electrical equipment and supplies including Ultraflex E electronic adjustable speed packaged drive from 1-40 h.p. and Ultraflex M magnectic amplifier packaged drive unit from 1-200 h.p.

K. S. Vreeland, B. R. Stratton, C. D. Capelle, F. L. Sheram, C. C. Corey.

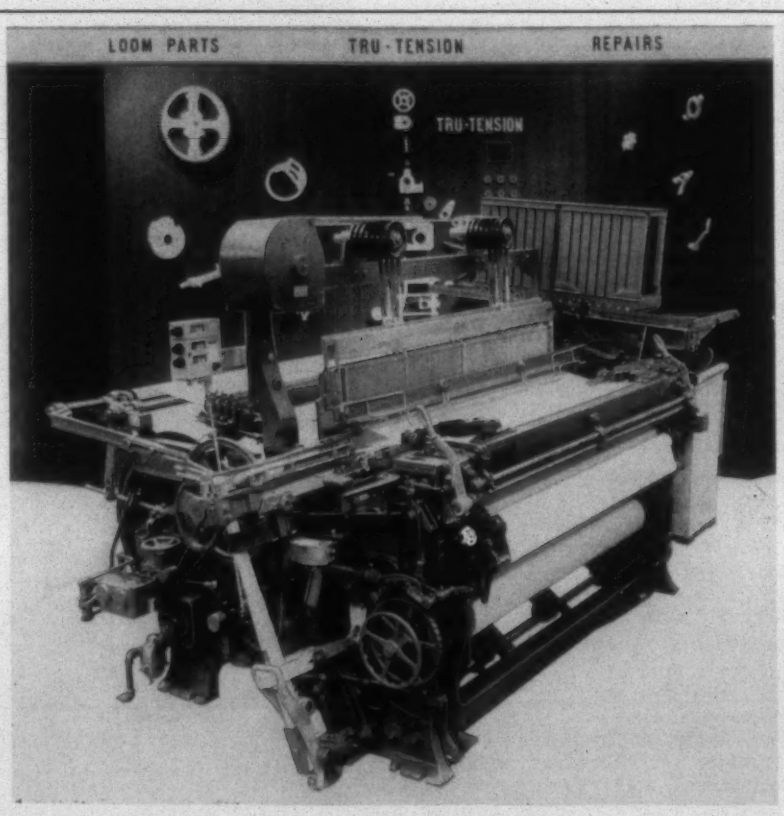
Daily News Record 210
New York, N. Y.

Darnell Corp. Ltd. 212
Long Beach, Calif.
(See Greenville Textile Supply Co.)

Davidson-Kennedy Co. 102-A
Atlanta, Ga.
(1) Davidson-Kennedy opener cleaner blender of the SRRL type. (2) Exhibit showing increase in removal of trash and decrease in removal of spinnable waste.

A. C. Kennedy, E. C. Kontz, W. P. Withers Jr.

Davis & Furber Machine Co. 480
Charlotte, N. C.
(1) 24-roll double-action napper. (2) Samples of tapes, aprons, card and napper clothing. (3) A sample card.



DRAPER X-2 MODEL LOOM—The Draper Corp. exhibit at the Southern Textile Exposition will include a 50-inch high-speed X-2 Model loom operating at 185 p.p.m. on 48x44 spun rayon, 15s filling and warp. The loom, equipped with all the latest Draper improvements, will feature the new automatic filling magazine designed to eliminate the job of battery filling. Another new application will be the Tru-Tension let-off, a compact precision-built mechanism designed to give a constant rate of yarn delivery while maintaining a uniform tension on the warp yarns. In addition to the X-2 Model, Draper will also display an 82-inch XP-2 wide sheeting loom operating at a speed of approximately 153 p.p.m. weaving 86x94 sheeting, warp 32½, filling 37. The XP-2 will also feature the automatic filling magazine, and will be equipped with pin and sleeve type parallel, No. 4 automatic Bartlett let off, and the new K-A adjustable cotton type warp stop with serrated electrodes and indicator fingers.

(4) Machines running manufacturing card and napper clothing.

E. N. Atwood, A. W. Reynolds, Louis Bussiere, Jim Mansfield, J. V. Wagoner, W. M. Truslow, J. H. Canady.

The Dayton Rubber Co. 135
Dayton, Ohio
(1) Daycollan box pickers. (2) Thorcheck endless checkstraps. (3) Thorbred premium loop pickers. (4) Embossed Dayco long draft apron. (5) Dayco roll coverings. (6) Dayco long draft aprons. (7) Thorobred loom pickers. (8) Thorobred lug straps. (9) Thorobred rub aprons.

J. O. Cole, Kenneth Karns, E. L. Howell, Claude Dunn, W. L. Morgan, G. H. Newbern, T. W. Meighan,

Denman Textile Rubber Co. 818
Charlotte, N. C.
(See Karl H. Inderfurth Co.)

Diehl Mfg. Co. 475
Somerville, N. J.
A complete line of textile motors including totally-enclosed fan-cooled, totally-enclosed non-ventilated and open (drip-proof) designs. Also special loom power transmitters.

A. R. Booth, E. F. Graham, A. J. Murphy, C. B. Pickering, J. W. Wilson, M. McCall.

The Dinsmore Mfg. Co. 234
Salem, Mass.
(See Hollister-Moreland Co. Inc.)

Dixie Bearings Inc. 416
Greenville, S. C.
Bearings, bushings and bearing stocks.

E. F. Brown, L. Lammers, H. L. Cox, J. Phelps, L. Disney, J. O'Connell, H. L. Graham, J. Rivers, J. Lindsey, G. C. Rhodes, J. Yow, A. Pope, C. Walker, W. Effler.

Dixon Corp. 817
Bristol, R. I.
(1) Dixon's extended draft changeovers for both Casablancas and Duo-Roth spinning frames. (2) Components of Dixon changeovers including gearing, roll stands, steel rolls, etc. (3) Duo-Roth super saddle guide, a new changeover that eliminates all top roll cap bars and lubrication. (4) Dixon cradles and cages.

Robert Rulon Miller, Warner H. Tabor, John M. Feeley, Floyd A. New, William B. Dunson, Robert K. Campbell.

The Dobeckmun Corp. 241
Lurex Yarn Division
New York, N. Y.
(See Dow Chemical Co.)

Dodge Mfg. Corp. 802
Mishawaka, Ind.

The Greenville Show

( ) A variable-pitch drive. (2) A Flexidyne card drive and dry fluid drives and couplings. (3) Prara-flex flexible cushion couplings, taper-lock sheaves, sprockets, couplings, conveyor pulleys. (4) Torque-Arm speed reducers.

G. H. Woolley, P. E. Keb, W. R. Parker.

George P. Dorris Co. 106-A
St. Louis, Mo.
(See Ira M. Valentine)

Dow Chemical Co. 241
Textile Fibers Department
Williamsburg, Va.
(1) Lurex non-tarnishing metallic yarns: new caustic resistant Lurex-MM-CR yarns, new facetted Lurex. (2) Zefran fiber.

Arthur S. Gould, George Todd, A. Greenfield, William Guerrant, J. N. Griggs, R. Hershberger, Gordon Lea, Leon Seidel, Philip Nathanson, Lynn Given, Kit Curtin.

Draper Corp. 132
Spartanburg, S. C.
(1) Model X-2 high-speed loom operating at 185 r.p.m. weaving 48x44 spun rayon 15s filling and warp. It features the new automatic filling magazine. (2) Model XP-2 82" loom operating at 153 r.p.m. weaving 86x94 sheeting. Warp 32½, filling, 37.

Thomas H. West, William K. Child, Walter E. Soderberg, Joseph B. Jackson, James H. Grant, Frederick M. Fitzgerald, Albert A. Laferte, Richard Childs, C. E. Burnham, Edward Cranshaw.

Dronsfield Brothers Ltd. 476
Oldham, England
(1) Dronsfield's grinding machine No. 270 with hydraulic traverse for buffing spinning rolls covered with synthetic or cork. (2) Card bend grinding machine No. 260 which has been designed for the purpose of obtaining accurate concentric flexible bends on the card. It is said to enable spinners to grind the flexible bends in position on the card. (3) Flat grinding machine No. 241, for grinding revolving flats dismounted from the cards. (4) Traverse wheel grinder. (5) Grinding drum. (6) Traverse grinder for side grinding or needle pointing. (7) Bare cylinder grinder. (8) Card fillet mounting machine.

James Dronsfield, Clifford Bradbury, Kenneth Sayce.

Eclipse Machine Division 212
Bendix Aviation Corp.
Elmira, N. Y.
(See Greenville Textile Supply Co.)

Edda International Corp. 503
New York, N. Y.
(1) Titan warp tying-in machines. (2) Excelsior reed cleaning and polishing machine.

B. Gudjonsson, H. A. Nagel, H. H. Thacker, E. L. Pullen.

Engineered Plastics Inc. 214
Gibsonville, N. C.
Plastic coated loom picker rods and miscellaneous textile items. Bobbins, spools, caps and other plastic parts.

D. M. Davidson Jr., C. H. Phillips, J. Elmo Jones.

Eriez Mfg. Co. 357
Erie, Pa.
(1) Non-electric magnetic separators. (2) Magnetic humps for pneumatic lines. (3) Spiked apron magnets.

Henry H. Hersey, Dean Thomas, R. A. Roosevelt, Ned Hirt.

Exact Weight Scale Co. 208
Columbus, Ohio
(1) Basic weight classifier which checkweighs the product and classifies by weight. Units are available to handle weights from a few miligrams to 100 pounds. (2) Model 4142 direct reading yarn count balance scale. (3) Model 4104 Shadograph micronaire testing scale. (4) Model 4204 center tower Shadograph scale for dyestuff weighing. Available in capacities 4 ozs. to 22 lbs. (5) Model 103 scale for cone and spool weight control. (6) Model 4063 scale (platform) for weighing cans of roving.

J. M. Orta, B. L. Price, T. L. Brewer, J. M. Eakin, W. A. Scheurer, R. M. Rapp, W. J. Schieser.

Excel Inc. 231
Lincolnton, N. C.
(1) Bonus sweeper. (2) Excel floating bottom creel trucks.

N. W. Eurey, Paul Eurey, E. E. Eurey, Charles Eurey.

Extremultus Inc. 272
New York, N. Y.
Belting reinforced with polymer.

George L. Pellicer, George M. Chapman, William A. Bundy.

The Fafnir Bearing Co. 147
New Britain, Conn.
Ball bearings and ball bearing power transmission units.

H. C. King, C. A. Berg, C. M. Thomas, J. P. Golden, J. V. Lansing, R. W. Parkinson, N B. Bagger, C. W. Jones Jr.

Fairbanks, Morse & Co. 102
Atlanta, Ga.
(1) Self-propelled lap dial scale with dial indicator and printer. (2) Totally enclosed textile motor.

C. W. King, E. W. Morgan, W. L. Wilson, W. R. McGarrity.

Faultless Caster Corp. 470-B
Evansville, Ind.
Casters and floor truck locks.

G. T. McLeod, T. J. Bromeling, J. Couch, A. E. Lange.

Fenwal Inc. 360
Ashland, Mass.
(See W. K. Hile Co.)

Fife Mfg. Co. 308
Oklahoma City, Okla.
(1) Centering guide designed to accurately center a range of materials regardless of the width variation in a given run. (2) Demonstration of the two basic methods of automatic guiding.

J. Fred Slaughter, Forrest C. Ames, Warren A. Schilling, R. W. Powers.

Finnell System Inc. 110
Elkhart, Ind.
Polishing-scrubbing machines for floors.

J. E. Bates, J. H. Dickson, J. A.

The Greenville Show——

Savard, J. T. Core, J. W. Linn, V. Gustavson.

Fisher Mfg. Co. 314
Hartwell, Ga.
Recently developed items for handling warp and filling yarns.
J. Glenn Fisher, James N. Fisher, Robert M. Matthews, Neal Houston, Allan Matthews, J. W. Davis.

Fletcher Works Inc. 807
Philadelphia, Pa.
(1) 20-spindle, 4¾" ring duplex twister. (2) 22-spindle, 6" ring with new Fletcher Posi-Feed rolls. (3) Speedex winder redraw. (4) Perfex reel.
Edward T. Taws Sr., Edward T. Taws Jr., Eldon Stowell, H. J. Roessel Jr., F. W. Warrington.

Foster Machine Co. 838
Westfield, Mass.
(1) Model 66 fully automatic filling bobbin winder. (2) Model 202 automatic cone winder.
W. C. Chisholm, E. C. Connor, P. H. Farmer, H. W. Ball, F. F. Stange, E. P. Dodge.

I. Foulds & Sons Inc. 229
Hudson, Mass.
(See Wilson F. Hurley)

The Foxboro Co. 405
Foxboro, Mass.
(1) A new instrument for recording cloth stretch consisting of two Type 16 A pneumatic speed transmitters and a Model 54 Consotrol recorder. (2) The new 1/10" Foxboro magnetic flow meter which measures difficult-to-meter fluids such as pigment dyes, hypochlorite, chlorine dioxide, hydrogen perodixe and starch solutions. (3) The Brookfield viscometran viscometer with the Foxboro Dynalog recorder. (4) CycleLog instruments including Model 40 C-H controller which automatically duplicates time and temperature dyeing schedules and Model 40C-SD which automatically controls a semi-decating machine. (5) A relative humidity recorder.
W. H. Ridley, R. M. Glass, T. A. Jones, E. R. Tims, S. C. Alexander, F. H. Leathers, L. L. Hodges.

Garland Mfg. Co. 106
Saco, Me.
Plastic loom pickers for C & K and Draper looms and loom leathers, etc.
F. L. O'Neil, F. L. O'Neil Jr., H. P. Garland, L. S. Garland, P. A. Garland.

Gast Mfg. Corp. 318
Benton Harbor, Mich.
(See L. W. Kinnear Co.)

Gaston County Dyeing Machine Co. 846
Stanley, N. C.
Reception booth.
Walter Newcomb, Gordon Hacker, George Hacker, Ray P. Craig.

The Gates Rubber Co. 447
Denver, Colo.
(1) Several types of loop pickers. (2) A variety of lug straps. (3) Harness strapping. (4) Take-up roll covering. (5) V-belts, cone and evener belts. (6) Card bands. (7) Spinning frame drives. (8) Air hose.
T. F. McCormish, R. O. Denslow, R. H. Lord, J. R. Luzader, R. L. Waldrop, F. R. Carson, H. W. Haynes, W. H. Hunter.

P. C. Gault Co. 354
Greenville, S. C.
(1) Industrial sound, Stromberg-Carlson Co. (2) Automatic dial telephone systems with from 2 to 200 lines. (3) Music, paging and locating systems.
P. C. Gault, J. E. Marshall, Robert Cooper, C. A. Butler, Jack Meyers.

General Box Co. 324
Meridian, Miss.
A collapsible wire-bound pallet box for fork-lift truck movement.
R. H. Goehe.

General Electric Co. 116
Small Integral Motor Department
Ft. Wayne, Ind.
New totally-enclosed non-ventilated textile motor available in polyphase ratings from 1-5 h.p.
W. G. Lee, J. R. Stoutland, D. A. Hamilton.

General Enterprises Inc. 337
Cleveland, Ohio
(See The Ore-Lube Co.)

Georgia-Carolina Oil Co. 339
Macon, Ga.
(1) Non-melting oils, greases. (2) Spindle oil. (3) Loom greases. (4) Ben Boy multi-purpose high temperature grease.
H. E. Coggin, B. N. Coggin, G. V. Dobbins.

David Gessner Co. 483
Worcester, Mass.
A 3-roll Hi-Torc double-acting napper, a laboratory napper and a Blend-Matic napper-roll grinder.
R. L. Bernard, J. P. Franklin, R. C. Franklin, R. A. Herald, P. F. Riedl.

Gifu Keiki Co. 245
Japan
(See Edward S. Rudnick)

Gilman Paint & Varnish Co. 450
Chattanooga, Tenn.
(Exhibiting with Olney Paint Co.)
(1) Gil-Strip for removing excessive films of floor sealer. (2) Gilman's airless spray mill white for use with the new Nordson airless hot spray equipment. (3) Gilpon chemical resistant coatings made with catalyzed epoxy resin. (4) Gil-Chem enamel, non-catalyzed epoxy resin. (5) A variety of paints, enamels, varnishes.
R. C. Adams, L. C. Teeters, R. B. Olney, W. P. Dobson, J. M. Isom, C. H. Dodson.

Glover Wood Turning Co. Inc. 432
West Millbury, Mass.
(See R. E. L. Holt Jr. & Associates)

Godo Shuttle Co. 245
Osaka, Japan
(See Edward S. Rudnick)

Goldens' Foundry & Machine Co. 268
Columbus, Ga.
(1) Power transmission equipment including V-belt sheaves, pulleys, couplings, hangers, ball and babbitted bearings. (2) Grey iron and semi-steel castings.
J. T. Boyd, J. L. Grantham, Robert K. Ballard, Jack W. Kibby.

Gossett Machine Works Inc. 233
Gastonia, N. C.

George A. Goulston Co. 331
Charlotte, N. C.
A variety of textile lubricants.
George A. Goulston, Ben Goulston, Arnold Goulston, Harold Miller.

Official Registrars

As in past years, TEXTILE BULLETIN will again serve as official registrars for the Southern Textile Exposition. Exhibitors will be provided with periodic registration lists of visitors as they enter Textile Hall. The lists will be delivered to each booth several times daily throughout the entire show.

Textile Bulletin's Exhibit Guide

pull out

for the Southern Textile Exposition

Greenville, S. C.
October 6-10
Show Hours 9 a.m.-6 p.m.

Since 1915

THE first Southern Textile Exposition opened in Greenville, S. C., at 9:30 a. m., Tuesday morning, November 2, 1915, with the ringing of bells, the shrieking of plant whistles, and the stirring strains of a brass band. It was a big event for Greenville, and for the Southern textile industry, marking as it did the first time such an event had ever been held in the South.

The idea for the exposition was suggested in 1914 to a meeting of the Board of Governors of the Southern Textile Association by the late David Clark, founder and publisher of this journal. Mr. Clark, who wanted to have a Southern show similar to the Textile Machinery Exhibition which was then held annually in Mechanics Hall, Boston, Mass., made a motion at the S.T.A. meeting that a committee be appointed to make plans for such a show. His motion was seconded by W. M. Sherard and Alonzo Iler, now deceased. Both Charlotte and Atlanta were given an opportunity to secure the exposition, but they declined in view of the cost involved to build a structure to house the exposition. Greenville, however, agreed to erect a permanent exposition building at a cost of some $130,000, and construction on Textile Hall was begun in 1916.

Since Textile Hall was still on the drawing boards at the time of the first exposition in 1915, that show was held in a vacant warehouse of the Piedmont & Northern Railway on West Washington Street in Greenville, across the street from the present hall. Its success far exceeded the expectations of its planners. Exhibitors quickly contracted for every foot of available floor space. Mill men from all the Southern states, and some even from the Northern states, made extensive plans to attend. A few mills in the vicinity of Greenville closed down for as much as a week to let all their personnel go to Greenville, and others, while remaining open, let as many of their hands off as wanted to attend.

An estimated 40,000 people crammed into Greenville for that first show. And judging from the week's schedule of events, it would be hard to say how many came to take in the show, and how many to get in on the social activities. One day of the show was labeled "Presidents' and Treasurers' Day"; another called "College Day" came complete with a football game (Clemson versus the University of North Carolina) and an Exposition Ball, a full dress affair with music provided by the Williamston (S. C.) Cotton Mills band. As sponsors of the show, the Southern Textile Association tied in its semi-annual meeting with the exposition, holding brief meetings at noon on the final three days of the show.

The first exposition in Textile Hall itself was held December 10-15, 1917. Subsequent shows have been held in May 1919, October 1920, October 1922, October 1924, November 1926, October 1928, October 1930, October 1932, April 1935, April 1937, March 1939, March 1941, October 1948, October 1950, October 1952, October 1954, and October 1956. Eight annexes have been added to Textile Hall since 1917, and more than 100,000 square feet of floor space will be in use this year. The show is sponsored by the Textile Hall Corp.

Greenville Exhibitors

AND THEIR BOOTH NUMBERS

Abbott Machine Co. 814
Abington Textile Machinery 829
Acme Steel Co. ..... 517 & 341
Adams Inc. 451
Addressograph-Multigraph Corp. 362
Akron Spool Mfg. Co. 432
Aldrich Machine Works 269
Allen Beam Co. 101
Allen-Bradley Co. 413
Allentown Bobbin Works 316
Allied Chemical Corp. 263
Allied Producers & Supply Co. 301
Allis-Chalmers Mfg. Co. 414
The Louis Allis Co. 504
Alvey Conveyor Mfg. Co. 515
American Air Filter Co. 437
The American Crayon Co. 332
American Lava Corp. 472
American Moistening Co. 840
American MonoRail Co. 111
The American Pulley Co. 212
American Safety Table Co. 234
American Stock Gear Division 106-A
America's Textile Reporter 225
Anderson Printing Co. 274
Anheuser-Busch Inc. 513
Armstrong Cork Co. 816
Armstrong Machine Works 443
Ashworth Bros. Inc. 122
Askania Regulator Co. 117
Atkinson, Haserick & Co. 481
Atlanta Brush Co. 418
Atlantic Gelatin 501

B & S Machine Co. 275
Bachmann Uxbridge Corp. 501
Bancroft Belting Co. 229
Bahan Textile Machinery Co. 140
The Bahnson Co. 830
Barber-Colman Co. 254
Barreled Sunlight Paint 223
The Bassick Co. 411
Louis P. Batson 220
Batson Mfg. Co. 220
Edward H. Best & Co. 110-A
Birch Bros. 248
Benjamin Booth Co. 468
The Bouligny Co. 826
Bowen-Hunter Bobbin Co. 212
Brainard Steel 463
Browning Mfg. Co. 126
The Bullard Clark Co. 422
Burlington Industries 432

Carolina Belting Co. 217
Carolina Radio Supply 320
Carolina Supply 230
Carrier Corp. 511
A. B. Carter Inc. 108
Cen-Tennial Cotton Gin Co. 824
Chandler Machine Co. 359
Charlotte Mfg. Co. 120
Clark-Cutler-McDermott Co. 452
Clark Equipment Co. 478
Clemson Textile School 127-A
Clinton Corn Processing Co. 205
Coats & Clark Inc. 221
Cocker Machine & Foundry Co. 836
Colby Co-operative Starch Co. 501
Coleman Co. 826
Collins Bros. Machine Co. 818
The Colson Corp. 485
Continental Diamond Fibre 465
Cook Machine Co. 322
Corn Products Sales Co. 445
Cotton-McCauley & Co. 833
Crabtree Textile Accessories 321
Crompton & Knowles Corp. 138
Cross Sales & Engineering Co. 349
Curtis & Marble Machine Co. 235
Cutler-Hammer Inc. 460

Daily News Record 210
Darnell Corp. 212
Davidson-Kennedy Co. 102-A
Davis & Furber Machine Co. 480
The Dayton Rubber Co. 135
Denman Textile Rubber Co. 818
Diehl Mfg. Co. 475
The Dinsmore Mfg. Co. 234
Dixie Bearings Inc. 416
Dixon Corp. 817
The Dobeckmun Co. 241
Dodge Mfg. Corp. 802
George P. Dorris Co. 106-A
Dow Chemical Co. 241
Draper Corp. 132
Dronsfield Bros. Ltd. 476

Eclipse Machine 212
Edda International Corp. 503
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Eriez Mfg. Co. 357
Exact Weight Scale Co. 208
Excel Inc. 231
Extremultus Inc. 272

Fafnir Bearing Co. 247
Fairbanks, Morse & Co. 102
Faultless Caster Corp. 471
Fenwall Inc. 360
Fife Mfg. Co. 308
Finnell System Inc. 110
Fisher Mfg. Co. 314
Fletcher Works 807
Foster Machine Co. 838
I. Foulds & Sons 229
The Foxboro Co. 405

Garland Mfg. Co. 106
Gast Mfg. Corp. 318
Gaston County Dyeing Machine Co. 846
The Gates Rubber Co. 447
P. C. Gault Co. 354
General Box Co. 324
General Electric Co. 116
General Enterprises Inc. 337
Georgia-Carolina Oil Co. 329
David Gessner Co. 483
Gifu Keiki Co. 245
Gilman Paint & Varnish Co. 450
Glover Wood Turning Co. 432
Godo Shuttle Co. 245
Golden's Foundry & Machine Co. 268
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Gower Mfg. Co. 506
Graton & Knight Co. 507
Greenville Textile Supply Co. 212
Ira L. Griffin & Sons 501
Gulf Oil Corp. 211

Hartford Machine Screw Co. 453
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Hollister-Moreland Co. 234
R. E. L. Holt Jr. & Associates 432
Hotwatt Inc. 360
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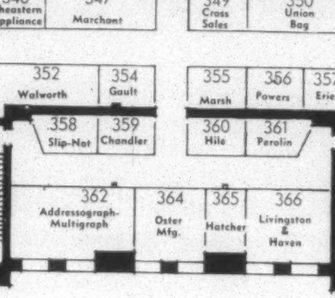
Ideal Machine Shops 239
Karl H. Inderfurth Co. 818
Industrial Coatings Inc. 219
The Industrial Dryer Corp. 469
International Business Mch. Corp. 464
International Corresp. Schools 336
Izumi Bobbin Co. 245

Jenkins Bros. 457
The Johnson Corp. 441

Visitors'

Guide to Exhibits

20th SOUTHERN TEXTILE EXPOSITION

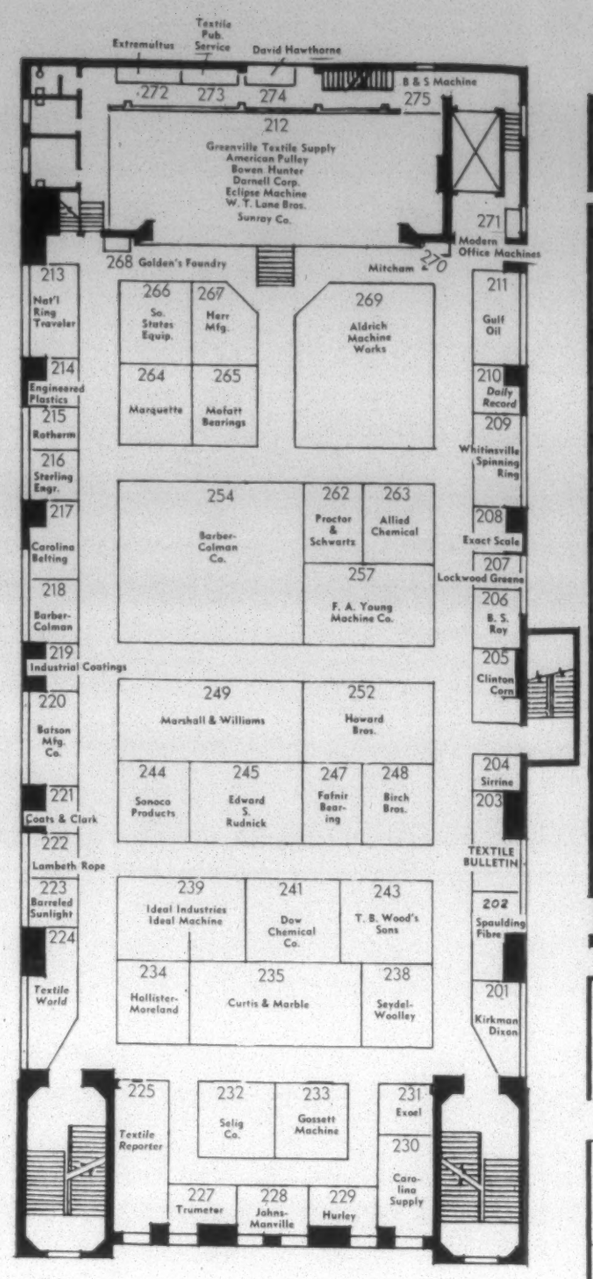


October 6-10, 1958

TEXTILE HALL

Greenville, South Carolina

BALCONY



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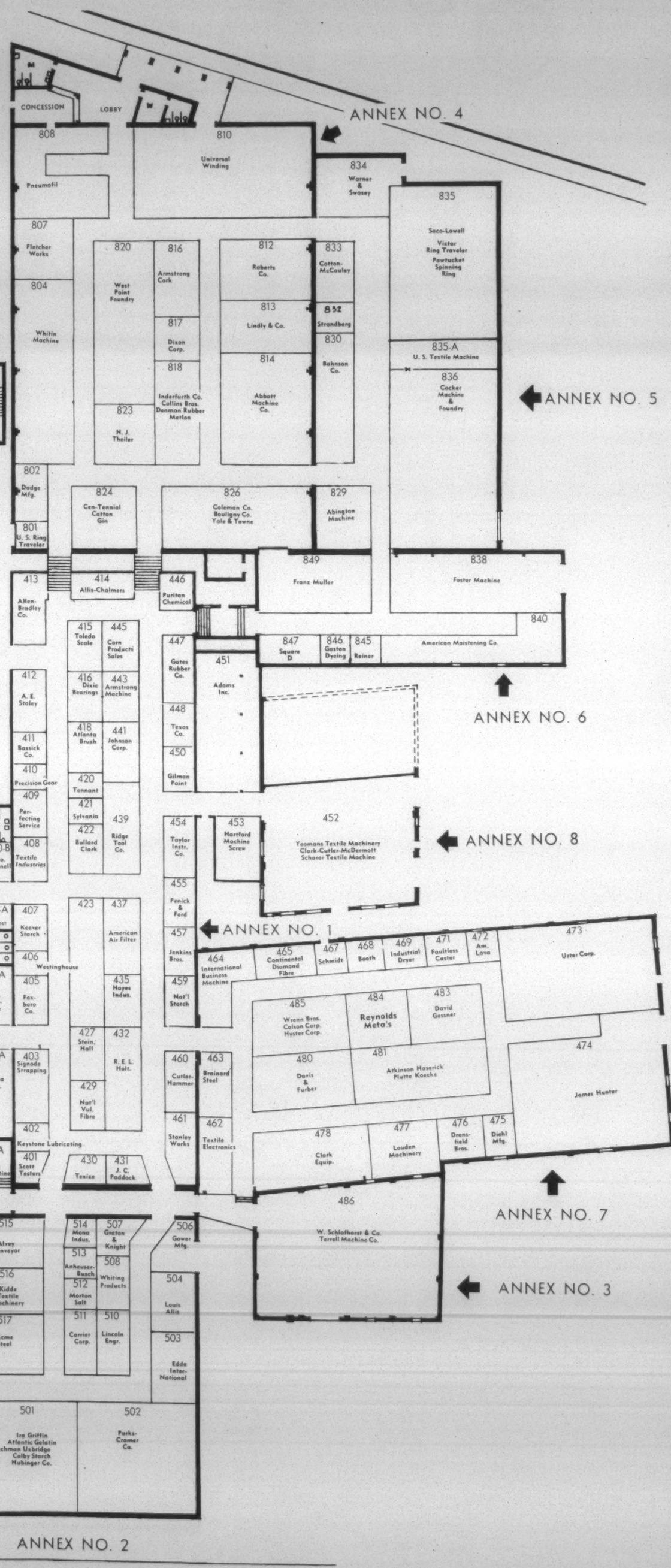


The Greenville Show

ower Mfg. Co. 506
Greenville, S. C.
cloth storage rack and a conveyor stem.
R. H. Park, P. C. Aughtry Jr.

raton & Knight Co. Inc. 507
Worcester, Mass.
oom leathers.
J. G. Henrikson, W. M. Willis, W. F. cAnulty.

reenville Textile Supply Co. 212
Greenville, S. C.
(Representing American Pulley Co., Bowen Hunter Bobbin Co., Darnell Corp., Eclipse Machine Division of Bendix Aviation Corp., W. T. Lane Brothers Inc.)
(1) Card drive unit with adjustable motor base for belt take-up. (2) Load-Jockey electro-hydraulic powered wheel for converting manually propelled elevating trucks to hydraulically-propelled. (3) Swivel textile caster which won't clog.
John R. Foster, George H. Batchelor, C. Leon Jones Jr., Dallas C. Neese, C. Weldon Fields, Charles G. Price, Clyde Hathcock, George H. Reynolds, Bernie C. Caldwell, C. Frank Roberts, Thomas G. Tyson, Hugh Z. Graham, T. M. Bailey, William L. Brigham, Eugene W. Ware, Marion Woods, C. Q. Mason, John T. Mason, James E. Poston, Honer Jordan, R. G. Dorman Jr., R. E. Stephens, G. A. Brannock, H. Merrill Bowman, John Muller, Sam C. Evans, James E. Williams, John C. Bannan.

Ira L. Griffin & Sons 501
Charlotte, N. C.
(Representing Atlantic Gelatin Division of General Foods, Bachman Uxbridge Worsted Corp., Colby Cooperative Starch Co., Hubinger Co.)
(1) Griffin size applicators in tandem. (2) Complete slasher using an improved front end, 9-can multi-cylinder drying section, creel section, multi-motor drive and complete instrumentation. (3) OK brand corn starch products by the Hubinger Co.
Ira L. Griffin Jr., William A. Griffin, G. B. Orr, J. R. Myers, Carl F. Merritt. Hubinger Co.: G. R. Underwood, J. R. Myers, John Harness.

Gulf Oil Corp. 211
Pittsburgh, Pa.
(1) Gulfcrown Grease E.P., a new lithium base, heavy-duty grease for extreme pressure applications. (2) Gulfspin spindle oil.
A. O. Buntin, J. H. Hooten, H. N. Hill, A. M. Wright, J. E. Cloeman, H. B. Minick Jr., C. L. Thomas, S. E. Owen Jr., C. T. Timmons.

Hartford Machine Screw Co. 453
Greenville, S. C.
(1) New top drive filling spindle without acorn on whorl. (2) Hartford's line of ball bearing spindles for warp, twisting, filling. (3) Bobbin hangers.
A. R. Andrews, A. M. Newell, N. D. Kennedy, W. G. Snowdon, J. L. Howard.

Hatcher Sales Co. Inc. 365
Atlanta, Ga.
Stanley automatic door controls.
F. M. Hatcher, J. T. Cobb.

Donald Hawthorne 274
Anderson, S. C.
(1) Wood shelving for warehouse and office use. (2) Business forms for the textile industry.
Donald Hawthorne, Bill Altman.

Hayes Industries Inc. 435
Jackson, Mich.
(1) The 30x42" tricot beam made for the latest type knitting machines. (2) The 38" section beam in motion.
William H. Maxson, Richard D. Richards, Warren D. Sharp, G. Boyd Vass, George Barrie.

Heany Industrial Ceramics Corp. 121
New Haven, Conn.
Heanium long-life, wear-resistant ceramic thread guides and tension devices.
A. O. Pieper.

Herr Mfg. Co. 267
Buffalo, N. Y.
The newly-designed M Type Herr conical ring featuring seam lubrication. Herr flyers for all types of uptwisting.
Hyatt B. Atwood, Robert M. Leach, William W. Woodare, James McLean, William K. Anderson Jr.

W. K. Hile Co. 360
Charlotte, N. C.
(Representing Fenwal Inc.)
(1) New system designed to eliminate the need for continuous scanning of multi-point control systems by instaneous signal. (2) Fenwal electric temperature controls. (3) Hotwatt cartridge, strip and tubular electric heating elements.
W. K. Hile, C. P. Maloney Jr.

Hillyard Chemical Co. 305
St. Joseph, Mo.
(1) Wood and concrete floor seals, finishes, paints and waxes. (2) Hil-Vac wet or dry vacuums. (3) Hillyard Hilboy scrubbing, steel wooling and polishing machine.
William A. Schmaltz.

Hollister-Moreland Co. Inc. 234
Spartanburg, S. C.
(Representing American Safety Table Co., Dinsmore Mfg. Co., Merrow Machine Co.)
(1) Style M Merrow automatic oiling machine. (2) Merrow sewing machines. (3) American Safety Tables. (4) Dinsmore railway and stand.
R. B. Moreland, O. S. Bachelor, J. B. Moreland, Lane C. Burris, Warren G. Martin Jr., Jack Washburn.

R. E. L. Holt Jr. & Associates 432
Greensboro, N. C.
(Representing Akron Spool Mfg. Co., Burlington Industries Inc., Glover Wood Turning Co., Mitchell-Bissell, Norris Brothers, Rice Dobby Chain Co., B. Snowiss Fur Co., Tontex Corp.)
(1) Ceramic guides, chromium plated guide wires, enameled guide wires, shuttle eyes, etc., by Mitchell-Bissell. (2) A variety of fur for textile uses including opossum and muskrat skins for shuttle fur, wool lambskins, sheepskin strips and sheepskin creel pads.
J. R. Mitchell, W. F. Fuetterer, R. B. Snowiss, R. E. L. Holt Jr., Floyd A. New, David R. Sellars, J. G. Skin-

The Greenville Show——

ner, William Brad Dunson, John P. Norman, Walter H. Huff.

Hotwatt Inc. 360
Danvers, Mass.
(See W. K. Hile Co.)

Howard Brothers Mfg. Co. 252
Worcester, Mass.
Card clothing for woolen, worsted, cotton, asbestos and silk cards. Napper clothing and brush clothing. Hand stripping cards and hand sampling cards.
E. Jack Lawrence, T. J. Jackson, H. Harold Suggs, Forrest J. Campbell, Warren W. Butterworth, Dederick A. Spencer, Harry C. Coley, Neal A. Mitchell, Charles A. Haynes.

Hubinger Co. 501
Keokuk, Iowa
(See Ira L. Griffin & Sons)

James Hunter Inc. 474
Greenville, S. C.
(1) Fiber meter blending system for cotton and synthetics. (2) Parallel motion for looms. (3) Bobbin holders. (4) Automatic weighing picker feeds. (5) Hydraulic checkmaster for looms. (6) Automatic weighing card feeds. (7) Mathews conveyor system. (8) Richards-Wilcox conveyor system. (9) Fuller tint pumps. (10) Thomas Leyland expander bars. (11) Leyland flex spools.
William F. Leineweber Jr., J. C. Whitehurst, J. T. White, H. A. Brown Jr., W. B. Estes, D. B. Powers.

Wilson F. Hurley 229
Greenville, S. C.
(Representing Bancroft Belting Co., I. Foulds & Sons Inc., M. B. Products, M. H. Parks Co.)
(1) Nylon core transmission belting. (2) Wooden head twister, card and loom bobbins. (3) Pneumatic roll pickers, air filters, lubricators and air pressure regulators. (4) Various types of leather loom strapping.
Wilson F. Hurley, R. C. Hurley, I. Manheimer, J. W. Davis.

Hyatt Bearings Division General Motors Corp. 104
Harrison, N. J.
Roller bearings.
C. C. Wardell, E. P. O'Neill, G. B. Baxley, E. Maurushat, D. Fox.

Hyster Co. 485
Danville, Va.
(See Wrenn Brothers)

Ideal Industries Inc. 239
Bessemer City, N. C.
(1) Ideal high speed drawing frames with individual drive, electro magnetic clutch, electric stop motions, individual vacuum cleaning system. (2) Ball bearing coiling systems.
Albert S. Roebuck, Frank B. McDonald, E. Sherwood Livingston, Walter L. Whitley.

Ideal Machine Shops 239
Bessemer City, N. C.
(1) Flyers: flyer converted to larger size, flyer pressers and flyer finishes. (2) Roving spindles—induction hardened new spindles and repairs of roving spindles. (3) Roving bolsters repairs. (4) Rebuilt cap bar nebs. (5) Rebuilt roving and spinning top rolls. (6) Induction hardened lapsticks. (7) Adapter spindle conversion for spinning and twisting. (8) Induction hardened lifting rods. (9) New bushings for lifting rods. (10) New twister and spinning spindles. (11) New gears.
Elvin F. Robinson, James A. Rayfield, Morgan Tuppe, John W. Long Jr.

Karl H. Inderfurth Co. 818
Charlotte, N. C.
(Representing Collins Brothers Machine Co., Denman Textile Rubber Co., Metlon Corp.)
(1) Various types of pickers, rubber loom parts including straps, sweep sticks, bumpers, etc. (2) A 16-spindle, 8″ ring, 11″ traverse twister equipped with stop spindles and individual feed roll arrangements to prevent drop ply and roller laps. (3) Various types of metallic yarns.
Karl H. Inderfurth, John Brown, Henry Collins, Nelson Collins, Arthur Brucks, Hayden C. Cobb Jr.

Industrial Coatings Inc. 219
Greenville, S. C.
Teflon coatings as applied to slasher cylinders, dry cans, etc. Vinyl coatings as applied to tanks and fans. Baked enamel as applied to instrument panels. Amerplate tank lining, sheet PVC cemented to the inside of tanks rendering the tank acidproof.
H. E. (Pete) Russell, William [illegible] Hawkins.

At Your Service

Staff members of TEXTILE BULLETIN will be on hand at Booth No. 203 throughout the Greenville Show to serve you in any way possible. Drop by for a chat or a favor. We'll be delighted to have you.

The Industrial Dryer Corp. 469
Stamford, Conn.
H-W conditioner, arranged to automatically pre-heat, condition, dry or exhaust for twist setting, shrinking, lofting and regain.
Philip H. Friend, F. W. Caesar.

International Business Machines Corp. 46[illegible]
New York, N. Y.

International Correspondence Schools 336
Scranton, Pa.
Special brochures, catalog and booklets describing I.C.S. courses and service facilities for business and industry.
Raymond Gagnon, U. E. Akins, W. F. Eckard, W. R. Craig, John K. Stearns, George McClenaghan, A. D. Livingston, W. M. Watkins.

Izumi Bobbin Co. 245
Osaka, Japan
(See Edward S. Rudnick)

Jenkins Bros. 457
New York, N. Y.
Valves.
E. C. Barett, W. S. Snellgrove, L. M. Leaptrott, L. B. McClary.

The Johnson Corp. 441
Three Rivers, Mich.
(1) Type S self-supporting Johnson rotary pressure joints with assembly plates and syphon elbows. (2) Type L-JSP road-supported rotary pressure joints with assembly plates and syphon elbows. (3) Johnson solenoid operated valves for automatic or remote flow control of liquids. (4) Johnson instant steam water heater. (5) Compressed air separators and aftercoolers.
Ralph W. Gotschall, James Dal Ponte, T. H. Abbey Sr., T. H. Abbey Jr., William B. Abbey, Bill Lee, Howard Duvall Jr., John Q. Marshall, Joe Davis, Ross Dickey.

The Keever Starch Co. 407
Greenville, S. C.
Reception booth.
James F. Kurtz, A. S. Fulford, Charles C. Switzer, F. M. Wallace, R. L. High.

William Kenyon & Sons Inc. 326
Perth Amboy, N. J.
(1) Kenbrake, a new method of stopping a spindle while the tape continues to run at the same speed. (2) Kennylbond spun nylon spindle and twister

tapes. (3) Kenyon tape bonding machine.
O. E. Butcher, W. A. Kenyon.

The Greenville Show

Keystone Lubricating Co. 402
Philadelphia, Pa.
(1) Loom gear grease applied with special portable lubricator. (2) No. 49 high temperature lubricant for dryers, air compressors and vacuum pumps. (3) Dobby head oil No. 96. (4) Winder lubricant No. 505. (5) Relief type fitting which replaces plugs in motor and pillow block bearings.
W. F. Boger, W. E. Wood, R. M. Goss, N. W. Benjamin.

Kidde Textile Machinery Corp. 516
Bloomfield, N. J.
(1) Combination tricot warper for 1-50"; 1-42"; 2-21"; or 2-25". (2) Compensating tension devices and instruments.
W. J. Behr Jr., H. W. Ruddick, O. C. Biegel, E. L. Herbert, J. H. Fleming, A. W. Post.

L. W. Kinnear & Co. 318
Charlotte, N. C.
(Representing C. A. Norgren Co., Gast Mfg. Co., Valvair Corp.)
(1) Norgen's Micro-Fog bearing lubrication. (2) An air compressor and vacuum pump by Gast Mfg. Co. (3) Hand-operated, solenoid and pilot-operated air valves by Valvair.
L. W. Kinnear, J. P. Marjette.

Kirkman & Dixon Machinery Co. 201
Greenwood, S. C.
Laboratory model of K & D waste machine.
W. J. Langley, C. M. Dixon.

Lambeth Rope Corp. 222
Kings Mountain, N. C.
A new spun nylon spinning tape.
J. P. O'Leary, A. L. O'Leary Jr., Frank Burke, Oliver D. Landis, V. Peter Loftis.

W. T. Lane Bros. Inc. 212
Poughkeepsie, N. Y.
(See Greenville Textile Supply Co.)

Lenkotex Co. Inc. 118
New York, N. Y.
(1) Spintex universal roller bearing spindle for spinning and twisting with SKF roller bearing and internal doffer guard. (2) Mann rings for spinning and twisting. (3) Saccardo paper tubes for spinning and twisting. (4) Harnisch loom temples with Perlon (nylon) bushings and flanges. (5) Lucke pin setting machine. (6) SSS comb and gill pins.
V. Lindner.

Lincoln Engineering Co. Division of McNeil Machine & Engineering Co. 510
St. Louis, Mo.
(1) Electro-Luber centralized power lubrication system. (2) Ram pump centralized power lubrication system. (3) Centro-Luber centralized lubrication system, manually operated.
Robert Crean, Ben S. Davis, Robert Doss, Clarence Lane, Kenneth Boyer.

Lindly & Co. Inc. 813
Mineola, L. I., N. Y.
(1) Model 602 multi-control, new modular electronic analyser for use with Lindly automatic yarn inspectors, end break detector and automatic thread and line inspector. (2) Electrotense for uniform yarn tension. (3) A variety of inspection devices including fabric inspector, yarn inspectors, end break detector, photo scanner and the Lin-Recorder.
Howard Lindemann, Daniel J. Mindheim, Vladimir Mateyka, Lewis A. Root, Charles P. Elgin, Sumner A. Averett.

H. F. Livermore Corp. 109-A
Boston, Mass.

Livingston & Haven Inc. 366
Charleston, S. C.
(Also representing Westinghouse Air Brake Co.)
(1) Long pneumatic lap control system for increasing uniformity of cotton and synthetic laps without increasing diameters. (2) Oil-Dyne hydraulic power units containing motor, pump and cylinder. (3) Pneumatic cylinders, valves and controls for air-operated control systems in automation.
A. C. Flint, M. D. Haven, J. E. Morrefield, W. V. Kalkinshaw, R. F. Hanley.

Livingstone Coating Corp. 311
Charlotte, N. C.
A variety of coatings.
S. Livingstone, A. B. Small.

Lockwood Greene Engineers Inc. 207
Spartanburg, S. C.
Photographs and architectural drawings of industrial and institutional buildings designed by the firm.
H. M. Rogers, J. C. Hipp, L. S. Booth, M. J. O'Brien, T. O. Ott, E. T. Sweet, M. V. Gelders, J. A. Gillespie, J. Z. Robinette, M. L. Boggs, J. E. Mickler.

The Louden Machinery Co. 477
Fairfield, Iowa
Monorail and crane equipment and a ceiling cleaner.
Wilbur Mayer, John T. Fulwiler Jr., Hugh Black, Ralph Berry, O. M. Jones, E. R. Zane Jr., Grady Jones, Leonard Woody, Brice Gamble.

M. B. Products 229
Detroit, Mich.
(See Wilson F. Hurley)

Macbeth Daylighting Corp. 113
Newburgh, N. Y.
(See Slaughter Machinery Co.)

Manton-Gaulin Mfg. Co. Inc. 115
Everett, Mass.
(See The Textile Shops)

Marchant Calculators Division Smith-Corona Marchant Inc. 347
Oakland, Calif.
(1) DeciMagic calculator, electric desk calculator which sets all decimals automatically. (2) Marchant's new 10-key adding machine.
R. B. Pollock, A. T. Davis.

The Greenville Show——

Marquette Division 264
Curtis-Wright Corp.
Cleveland, Ohio
Spindles and precision spring clutches.
J. W. Griggs, C. S. Sikes, R. M. Turner, C. H. White, W. P. Russell.

Marsh Stencil Machine Co. 355
Belleville, Ill.
(1) Stencil cutting machines, hand operated and electric and stencil supplies. (2) Marsh electric Dial-Taper and Twin-Taper machines for dispensing moistened gummed tape. (3) Felt-tip markers.
E. J. Marsh, E. G. (Jack) Krause, Earl Lorenz.

Marshall & Williams Corp. 249
Greenville, S. C.
(1) Medium duty cloth room tenter designed for limited space. (2) Guiding edge control equipment. (3) Wind-up devices, air and hydraulic cylinders. (4) A variety of tenter clips and pin tenter links.
Richmond Viall, John C. Nash, Fred H. Land, Al Marshall, Ned Ford, Bill Brown, Fred Hyatt.

Master Electric Co. 144
Dayton, Ohio
(See Reliance Electric & Engineering Co.)

McDonough Power Equipment Inc. 327
McDonough, Ga.

Merrow Machine Co. 234
Atlanta, Ga.
Anti-friction twisters, spindles, twister and spinning accessories.
E. D. Meadows, J. C. Martin, A. F. Gandy, S. R. Hogg, B. J. Wright, J. R. Caldwell, W. S. Coleman.

Merrow Machine Co. 234
Hartford, Conn.
(See Hollister Moreland Co.)

At Your Service

Staff members of TEXTILE BULLETIN will be on hand at Booth No. 203 throughout the Greenville Show to serve you in any way possible. Drop by for a chat or a favor. We'll be delighted to have you.

Metlon Corp. 818
New York, N. Y.
(See Karl H. Inderfurtth)

Minnesota Paints Inc. 325
Minneapolis, Minn.
A variety of paints, seals and finishes.
Carl S. Morgan, D. D. Wyatt, W. C. Blount.

Mitchell-Bissell Co. 432
Trenton, N. J.
(See R. E. L. Holt Jr. & Associates)

Modern Office Machines 271
Greenville, S. C.
Thermo-Fay dry-process copying machine by Minnesota Mining & Mfg. Co.
Lloyd Auten, Carl Jones, Glenn Stevens, Ruth Parkinson, Betty Nix.

Modern Textiles Magazine 119
New York, N. Y.

Moffatt Bearings Co. 265
Philadelphia, Pa.
An assortment of anti-friction bearings and special mounted units.
O. S. Livingston, D. G. Hornbaker, H. W. McCard, Ralph Milford, A. Q. Davis, Benjamin Ivey, Joseph Blackwell, W. B. Osborne, S. D. Zeanah.

Mona Industries Inc. 514
Paterson, N. J.
(1) Monalit-Duplex yarn conditioning machine, suitable for bobbins, quills, cones, cheeses and skeins. (2) Monarc yarn conditioning attachment for Abbott automatic quillers.
R. H. Somer, R. W. Bailey, D. C. O'Hair, Charles G. Stover.

Monroe Calculating Machine Co. 343
Orange, N. J.

Morton Salt Co. 512
Chicago, Ill.
A variety of industrial salts.
B. L. Cribb, J. M. Culp, A. C. Dewey, A. C. Frick, J. Mullinax, J. B. Neill, E. R. Ravenel.

Mount Hope Machinery Co. 114
Taunton, Mass.
(1) Skew liner, automatic weft straightener. (2) Automatic tension control. (3) Floating roll guide.
J. D. Robertson, W. M. Gallahue, S. A. Moffitt, Alex Spears Jr., E. F. Slaughter, P. H. Slaughter, Wright Macomson.

Franz Muller Co. 849
M. Gladbach, Germany
(1) Bitroma winder for winding all types of yarn on dye tubes or cones at from 220-1600 y.p.m. (2) 3-blade shear for shearing high quality fabrics. (3) Rotary cloth press for pressing woolens, worsteds and synthetics. (4) High speed Tri-Napper.
K. A. Mullers, August Hoverath, J. M. Ballentine, P. M. Parrott, S. H. Huffstetler, G. A. Poteat.

T. J. Murphy Fur Co. 220
Lewiston, Me.
(See Batson Mfg. Co.)

National Carbon Co. Division Union Carbide & Carbon Co. 334
Atlanta, Ga.
Batteries, heat exchangers, pumps, valves, pipes and fittings.
C. T. Tullis Jr., T. S. Manchester, H. L. Shepard.

National Ring Traveler Co. 213
Gaffney, S. C.
Special finish and velvet finish for all steel travelers. Regular line of spinning and twister travelers.
L. E. Taylor, T. H. Ballard, F. S. Beacham, H. B. Askew, F. L. Chase Jr.

National Starch Products Inc. 459
New York, N. Y.
(1) Cato cationic starch for warp sizing and finishing. (2) Kofilm acetylated starch for warp sizing under a variety of mill conditions. (3) Nu-Film, used in the sizing of cotton, spun rayon and various blended yarns.
J. F. Fitzgerald, L. J. Horan, H. C. Olsen, H. M. Smith, D. Ray Lassiter, C. A. Dyer.

National Vulcanized Fibre Co. 429
Wilmington, Del.
A variety of materials handling equipment including a floating bottom truck, doffing truck, various types of roving cans, trays and mill boxes.
R. S. Fisher, E. B. Burnley, J. C. Davis, P. D. Heppe, L. Caldwell, L. Phelps.

Nemo Industries Inc. 334
Atlanta, Ga.
(1) A moving picture of Nemo automatic cutting machine which cuts light or heavy fabrics, padding and rugs. (2) The Nemo jet cooker which cooks slurry in minutes.
Norman E. Elsas, Arthur C. Kleiderer.

New England Paper Tube Co. 128
Pawtucket, R. I.
(See Watson & Desmond)

——The Greenville Show

New York & New Jersey Lubricant Co. 109
New York, N. Y.
The latest and most improved grades of Non-Fluid Oil for textile machinery.
Joe H. Bennis, I. L. Hall, L. W. Semason Jr., R. F. Bagwell, A. M. Swan, F. W. Phillips, J. A. Sorrells Jr., F. W. Winecoff, E. J. Wood.

Nippon Spindle Mfg. Co. 245
Osaka, Japan
(See Edward S. Rudnick)

Nippon Card Clothing Co. 245
Japan
(See Edward S. Rudnick)

Roy Noble Co. 220
New Bedford, Mass.
(See Batson Mfg. Co.)

O. A. Norgen Co. 318
Englewood, Colo.
(See L. W. Kinnear Co.)

Norris Bros. 432
Greenville, S. C.
(See R. E. L. Holt Jr. & Associaes)

O. M. Spinning Machine Co. 245
Osaka, Japan
(See Edward S. Rudnick)

Olney Paint Co. 450
Spartanburg, S. C.
(See Gilman Paint & Varnish Co.)

Orama Engineering Co. 108-A
Division, H. F. Livermore Co.
Boston, Mass.

The Ore-Lube Co. 337
New York, N. Y.
(Also representing General Enterprises Inc.)

The Oster Mfg. Co. 364
Cleveland, Ohio
Pipe and bolt threading equipment.
J. E. Vaughn, H. E. Robb, R. C. Baumgartner.

J. C. Paddock Co. 431
Spartanburg, S. C.
Textile materials handling products such as doff trucks, roving trucks, spring botton trucks, fibre doff boxes, quill cans.
Sam E. Mabry, L. E. Corn.

Parks & Woolson Division 322
Riggs & Lombard Co.
Lowell, Mass.
(See Riggs & Lombard)

Parks-Cramer Co. 502
Fitchburg, Mass.
(1) Certified Climate humidification and air-conditioning. (2) Traveling cleaners for textile machines, overhead surfaces and floors. (3) Vacuum end collection. (4) Vacuum lint removal. (5) Creels for spinning frames.
W. J. Buck, J. F. Crooks, Glenn Farthing, Maynard Ford, W. B. Granger, J. R. Henderson, W. W. Hewitt, G. F. Kellog, J. C. Kelly, C. D. Lee Jr., John Nesmith, L. R. Sibley, W. B. Walker, C. E. Ware Jr.

M. H. Parks Co. 229
Winchendon, Mass.
(See Wilson F. Hurley)

Pawtucket Spinning Ring Co. 835
Division of Saco-Lowell Shops
Pawtucket, R. I.
(See Saco-Lowell Shops)

Penick & Ford Ltd. Inc. 455
Atlanta, Ga.
Textile starches, dextrines, sugars, syrups and gums—featuring new and improved Penford gums.
O. H. Tousey, P. G. Wear, G. M. Anderson, J. H. Almand, J. R. Heard, G. C. Henry, W. J. Kirby, T. H. Nelson, R. H. Pharr, J. P. Poer, M. W. Ramsey.

George H. Pennell Co. 110-B
Greenville, S. C.
(Representing Ramset Fastening System and Wheel Trueing Tool Co.)
(1) Truco diamond drilling equipment. (2) Ramset fastening system for fastening into steel and concrete.
George H. Pennell, Charles L. Garrett, J. W. (Jack) Parsons.

Perfecting Service Co. 409
Charlotte, N. C.

Permacel 303
New Brunswick, N. J.
(1) Slasher Tape, a pressure sensitive crepe paper tape with non-staining adhesive for use in cotton mills. (2) Permacel ET 3758 Teflon impregnated glass cloth tape used as a roller coating wrap for reducing friction. (3) The P 4 T Strap-It tape dispenser. (4) Permacel double-faced and paper tapes.
Hale Dant, J. S. DeNoia, J. W. Hagaman, Hugh Walsh.

The Perolin Co. Inc. 361
New York, N. Y.
(1) Formet water system treatment No. 321 crystals for controlling corrosion and scale formation in all types of water supply and cooling systems. (2) Perolin fuel oil treatment, an additive for eliminating sludge and water in heavy fuel oil burning installations.
Henry R. Strong, James F. Scott, Ken C. Gilmore, Bert V. Tiblin.

Pick Mfg. Co. 310
West Bend, Wisc.

Plutte, Koecke & Co. 482
Wuppertal-Barmen, West Germany
(See Atkinson, Haserick & Co.)

Pneumafil Corp. 808
Charlotte, N. C.
Model C-12 collector unit, an individual frame motor enclosure and Pneumastop with Electrofil.
C. R. Harris, J. W. Barr, M. E. Herndon, G. E. Archer, E. J. Williams, D. Thorp, W. Lloyd.

Poe Hardware & Supply Co. 143
Greenville, S. C.
(1) Rust-Oleum, a rust preventive

The Greenville Show——

containing especially processed fish oil vehicle. (2) Brown & Sharpe precision tools including micrometers, indicator gages, depth gages, ground flat stock, etc. (3) Air hose, water hose, V-belts, transmission belting, rub aprons, friction tape, etc., by Boston Woven Hose & Rubber Co.

Poe Hardware: Crawford Poe, Carter Poe, W. T. Henderson Jr., J. T. Hardy, J. J. Swan.

Boston Woven Hose: Stan Clifford.

Brown & Sharpe: Bruce Loring.

Rust-Oleum: Robert Ferguson.

The Powers Regulator Co. 356
Skokie, Ill.
(1) Series 200 regulator. (2) Liquid level control bubbler system. (3) Static pressure regulator. (4) Indicating temperature control. (5) Diaphragm control valves.

R. W. Clark, E. R. Bowman, B. L. Arbuckle, C. C. Carter, B. Vehorn, J. Slattery.

Precision Gear & Machine Co. 410
Charlotte, N. C.
Card drives, ball-bearing applications, machine parts and a loom friction let-off unit.

Proctor & Schwartz Inc. 262
Philadelphia, Pa.
(1) Combination pin and clip tenter, Dalglish-Artos design. (2) Artos tenter housing for both new and installed tenters of any design. (3) Tensionless float dryer. (4) Print goods dryer of single and multiple pass with or without washing and drying arrangements for back greige. (5) Curing machine permitting very low curing temperatures.

C. W. Schwartz, W. H. Poole, T. A. Mahan, J. P. Christ.

Progressive Engineering Inc. 128
Rockland, Mass.
(See Watson & Desmond)

The Pure Oil Co. 105
Charlotte, N. C.
Lubricants.

W. D. Crawley, L. G. Crompton Jr., R. P. Johnson, C. D. Walthall, B. C. Parrish, J. M. Morrison, J. W. Griffith, L. C. Hollingsworth.

Puritan Chemical Co. 4[illegible]6
Atlanta, Ga.
New Convertamatic floor machine, automatic scrubbing and wet pick-up machine.

C. E. Braun, E. P. Collins, H. [illegible]. Hartley, G. B. Wright, T. V. Fisher, H. S. Collinson, B. C. Inabinet, C. [illegible]. Shugart.

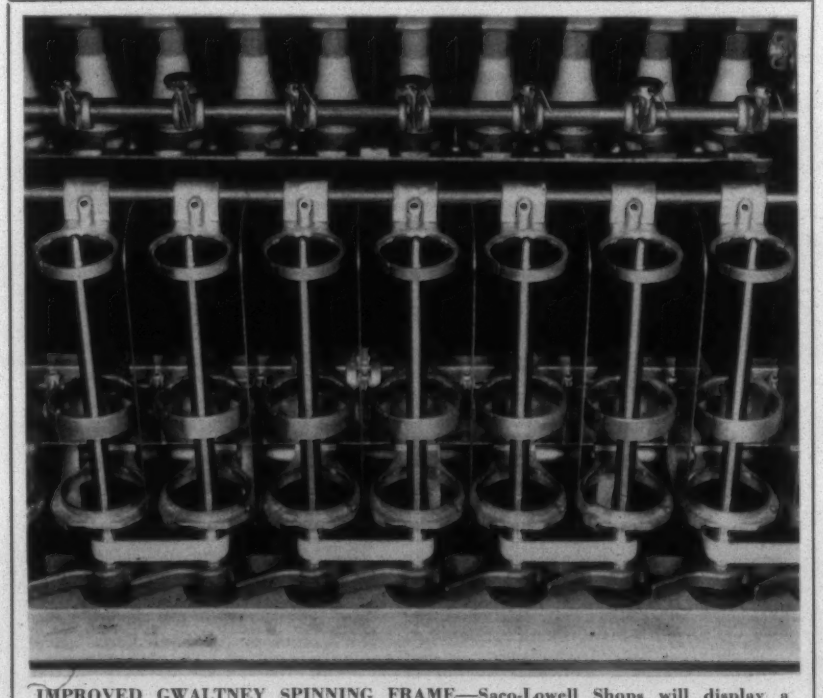
Ramset Fastening System 110-[illegible]3
Cleveland, Ohio
(See George H. Pennell)

Ramsey Chain Co. 106-[illegible]A
Albany, N. Y.
(See Ira M. Valentine)

Reeves Pulley Co. 144
Columbus, Ind.
(See Reliance Electric & Engineering Co.)

Robert Reiner Inc. 845
Weehawken, N. J.
Reception booth.

Walter Horn, H. D. Scheube.



IMPROVED GWALTNEY SPINNING FRAME—Saco-Lowell Shops will display a new improved Gwaltney spinning frame as part of its exhibit at the Southern Textile Exposition. The new Gwaltney incorporates four new design changes: (1) lower frame—the new model is four inches lower than previous models, making it easier to creel in and service the drafting element; (2) improved tilting separators have been installed to further increase the efficiency of the doffing operation; (3) new balloon control rings present an entirely new contour to the yarn to provide for better control; and (4) the conventional ring rail has been replaced with new individual ring holders which reduce ends-down, improve yarn quality and facilitate cleaning. The frame on exhibit at the exposition will have a Duo-Roth drafting element, one side equipped with Saco-Lowell's Tru-Set top arm, the other with the Saco-Lowell MagneTrol pressure system.

Reliance Electric & Engineering Co. 144
Cleveland, Ohio
(1) Reliance V-S drive, 50 h. p. with start-stop, speed selector, jog, dynamic braking and field reversing. (2) New fractional horsepower Reliance V-S Jr. all-electric adjustable-speed drive with pushbutton reversing, start-stop, jog and dynamic braking. (3) The Reeves line of power equipment including Vari-Spin drive, Series 200 Motodrive, Series 90 motor pulley and variable-speed transmission.

G. Van Buskirk, R. G. Wilson, W. H. Chambers, V. R. Murphy, C. E. Robinson, J. B. Thomas, J. P. Reeves, E. G. Orahood, A. J. Stockslager, J. G. King, E. R. Campbell, T. C. Feathers, R. T. Willard, D. H. Gordon, F. W. Leitner, L. E. Blackwell, A. W. Fairer, M. R. Snyder, J. L. Highsmith, C. D. Wright, B. E. Tharpe, P. J. McCausland.

Reynolds Metals Co. 484
Richmond, Va.
(1) The complete Reymet line including sample fabrics and finished apparel using Reymet staple. (2) Samples of aluminum fabricated pastes that are used in the textile industry.

R. F. Lewis, Frank Hart, Tom Manning, S. R. McCauley, Tom Kirby.

Rice Dobby Chain Co. 432
Millbury, Mass.
(See R. E. L. Holt Jr. & Associates)

——The Greenville Show

The Ridge Tool Co. 439
Elyria, Ohio
A new 3-wheel tubing cutter, a portable Tristand top-screw chain vise, new geared pipe threaders, a new hex wrench and the Model 300 lightweight portable power drive.
R. D. Frye, F. Roman, R. Hamlin.

Riggs & Lombard Inc. 322
Lowell, Mass.
(Including Cook Machine Co. Inc. and Parks & Woolson Machine Co.)
Equipment for practically all finishing processes for cotton, woolen, worsted and synthetic fabrics and for certain knitgoods.
Ernest Cook, Walter Malloy, E. R. Hayes.

Roberts Co. 812
Sanford, N. C.
(1) Roberts M-1 spinning frames for cotton, synthetic, worsteds and blends, short and long staple lengths. (2) Twister speedup modernization. (3) Modernization material for existing frames including ball bearing spindles, ball bearing top roll suspension, double apron drafting, AeroCreels, Unit-Vac suction cleaning, underframe motor package and all accessories.
R. E. Pomeranz, J. N. Pomeranz, R. D. Padgett, D. E. Henderson, C. E. Oliver, M. C. Golden, C. E. Hollis, W. A. J. Peacock, R. C. Scott, M. O. Bradshaw, R. L. Carroll.

E. F. Rose & Co. 302
Maiden, N. C.
Scavenger rolls, revolving top clearers, clearer boards and clearer covers.
W. Rose, W. G. Rose.

Rotherm Engineering Co. Inc. 215
Chicago, Ill.
Expansion joints and compensators, with and without sight glass indicators.
H. S. Kuhn, H. D. Hohm.

B. S. Roy & Son Co. 206
Worcester, Mass.
(1) Various grinders including an "in place" portable roll grinder, AlumaRoy flat drum grinder, a ball bearing traverse grinder, a metallic grinder. (2) Microsision cradle.
Ed Barnes, Howard Duke, Don Bousquet.

Edward S. Rudnick 245
New Bedford, Mass.
(Representing Enshu Weaving Machine Co., Gifu Keiki Co., Godo Shuttle Co., Izumi Bobbin Co., Nihon Spindle Mfg. Co., O-M Spinning Machine Mfg. Co.)
(1) Automatic picker lap scale which weighs each lay, records the weight, indicates when picker needs adjustment and adjusts the picker. (2) Japanese paper and wooden spinning tubes. (3) Sliver-to-yarn spinning frame. (4) Drawing frame with automatic can changer. (5) Pneumaniez suction cleaning system. (6) Roller bearing spindles. (7) Anti-friction spinning rings. (8) Bobbins and quills. (9) Card clothing with anti-tarnish wire. (10) Shuttles, plain and fibre clad.
Edward S. Rudnick, William Bowlin, M. Sanada, S. Sato, S. Tominaga.

Saco-Lowell Shops 835
(Also Pawtucket Spinning Ring Co. and Victor Ring Traveler Co.)
(1) Various sizes of Speed-Tex rings and Speed-Tex Model 01C rings. (2) A movie of the traveler in action, showing typical unfavorable spinning conditions and the ideal condition. (3) A new Gwaltney high-speed spinning frame equipped with Speed-Tex Model 01C rings, 2½" diameter, gauge of frame 3½" and Magne-Trol system of applying top roll pressures. (4) A variety of modernization changeovers including a new automatic cleaning unit for No. 11 dust and waste extractors, anti-friction card coilers, big coilers for drawing, self-cleaning top and bottom clearers for drawing, sponge rubber clearers for roving and spinning and anti-friction bearing applications for roving frames.
W. F. Lowell Sr., E. J. McVey, J. W. Hubbard, F. S. Culpepper, L. W. Lyles, Herman J. Jones.

Schachner Leather & Belting Co. 335
Charlotte, N. C.
(1) Loop pickers for X model looms made from plastic. (2) Latex treated long drafting spinning aprons made from leather. (3) Leather parts for looms including check straps, box plate and binder leathers.
B. M. Schachner, Charles G. Hinkle, Jack L. Harkey, Julius Schachner, Paul G. Schachner.

Scharer Textile Machine Works 452
Erlenbach-Zurich, Switzerland
(See Yeomans Textile Machinery Co.)

W. Schlafhorst & Co. 486
M. Gladbach, Germany
(See Terrell Machine Co.)

Schmidt Mfg. Co. 467
Greenville, S. C.
(1) Polydur plastic loom parts such as pickers, lug straps, sweepsticks, etc. (2) Polychrome leather loom parts such as picker straps, heel straps, harness straps, etc. (3) Bumpers of rubber and rubberized fabric and leather combinations. (4) The Shirley tension tester for shuttle tension.

Scott Testers Inc. 401
Providence, R. I.
(1) Model CRE constant-rate-of-extension tester for tensile evaluations from 0.1 to 1,000 lbs. (2) Model X-5 light duty tensile tester with capacity to 20 lbs. (3) Model B internal bond tester for evaluating the internal bond strength of nonwoven materials. (4) New A-8 heavy duty fabric clamp, capacity 2,000 lbs. (5) Spruance pneumatic tire cord clamps. (6) Products of Scott Testers Southern, including a new balance for determination of count, a standard 36" roving reel, standard umbrella reel, standard 36" or 54" yarn reel, standard evenness controller.
Edwin H. Benz, John E. Hargreaves.

The Selig Co. 232
Atlanta, Ga.
(1) CP-43, a specially designed liquid cleaner for the removal of grease and oil from metal surfaces. (2) The Lawlor battery-operated water scrubbing and pick-up machine. (3) Various floor maintenance products including Floroseal floor seal, Selco concentrate, Flortone, sanding machines, floor machines, vacuum machines.
W. F. Bode, Alvin Hamburger, Charles Pearl, Lee Strasburger, Charles Vickery, Milton Doctor, Sol Hayes, Bob Hyatt, Dick Prints.

Seydel-Woolley & Co. 238
Atlanta, Ga.
(1) The Seyco warp lubricator, after-waxing roll with new variable speed drive. (2) The Niagara Twist-Setter yarn conditioning machine. (3) Samples of various Seyco chemicals.
Vasser Woolley, John R. Seydel, A. W. LaGrone, David Meriwether, E. F. Harrison, Francis B. deLoach, Baxter Hemphill, V. R. Mills, W. H. Cutts, W. L. Whisnant, Howard McCasey, R. P. Anthony Jr.

Shell Oil Co. 103
New York, N. Y.
The new Vexilla line of oils for textile machine lubrication.
E. J. Colerick, K. H. Nonweiler, P. Goddard, M. S. Treadway, G. Potter, T. Stevens, E. L. H. Bastian.

Signode Steel Strapping Co. 403
Chicago, Ill.
Power strapping tools and machines.
M. L. Fagin, S. W. Brown, C. H. Carlson, J. H. Elsinger, H. Sierra, C. E. Talbutt.

J. E. Sirrine Co. 204
Greenville, S. C.
Reception booth.
R. R. Adams, A. D. Asbury, A. S.

The Greenville Show——

Bedell, F. B. Bozeman, J. H. Bringhurst Jr., L. W. Burdette, W. L. Carpenter, G. W. Cumbus, H. S. Forrester, H. W. Frederick, G. C. Gaskin, O. F. Going, C. E. Green, S. M. Hunter, W. C. Kendrick, C. J. Liles, Milton Lite, J. T. Mallard, F. M. Martin, H. L. McDonald, H. W. Meakin, I. J. Mikell, D. G. Moon, G. R. Morgan, W. H. Nardin, G. P. Patterson, A. M. Rickman, J. L. Roberson Jr., W. A. Robinson, L. A. Seaborn, J. F. Spellman, M. M. Stokely, H. C. Swannell, H. H. Watkins, C. T. Wise, George Wrigley Jr.

Slaughter Machinery Co. 113
Charlotte, N. C.
(Representing Atlas Electric Devices and Macbeth Corp.)
(1) Atlas Accelerotor abrasion tester. (2) Atlas pilling tester for testing woolens and synthetics. (3) Scorch tester by Atlas for detecting retention of chlorine in goods. (4) A new line of Macbeth Examolites including OR Series open reflector type and the TC and SC series which are completely enclosed with prismatic diffusing glass.
E. F. Slaughter, P. H. Slaughter, W. W. Macomson, Norman Macbeth.

Slip-Not Belting Corp. 358
Greensboro, N. C.
Plastic loop and drop box pickers, checkstraps, box plate and binder leathers, harness strapping, lug straps and leather belting.
P. J. Shivell, O. Cox, M. Bell, O. L. Carter, J. Youngblood, E. Meservey, T. Doane.

E. E. Smith & Son Inc. 313
Gastonia, N. C.
Miscellaneous repairs and supplies for carding and spinning.
Robert S. Brice, David P. Long, Wistar G. Walker.

B. Snowiss Fur Co. (432)
Lock Haven, Pa.
(See R. E. L. Holt Jr. & Associates)

Sonoco Products Co. 244
Hartsville, S. C.
Cones, tubes, spools, cores, bobbins and paper specialties.

Southeastern Loom & Machine Works Division of Abney Mills 129
Greenwood, S. C.
A modified X-2 loom, 18x42" card coiler, loom repair parts and spinning frame cylinder replacements.
A. Reid, D. Williams, W. Flinn, J. Manley, O. V. Hair, J. A. Moore, H. Whitmire, C. Still, R. Cannada.

Southeastern Safety Appliance Co. 346
Atlanta, Ga.
Fire extinguishers, first-aid supplies, electrician's and lineman's tools and equipment and rubber gloves.
George D. Johnson, P. H. Ellington, W. E. Beddingfield, R. E. Sisson, J. R. Copeland.

Southern Loom Development Co. 142
Greenville, S. C.
Hunt let-off attached to loom.
Yvonne B. Hunt, J. W. Stuart, F. E. Hooper.

Southern States Equipment Corp. 266
Hampton, Ga.
(1) 24" wool coiler. (2) Individual card drive. (3) Ball bearing comb box. (4) 18" complete coiler stand for cotton card. (5) 24" wool coiler. (6) Can dolly.
C. W. Walter, C. H. Kennington, John Walters, W. A. Knapp, Frank Birchfield, R. L. Williams, W. N. Watkins.

Southern Textile News 304
Charlotte, N. C.

Spaulding Fibre Co. 202
Dover, N. H.
(1) Roving can, 18x42" with X-1 synthetic finish. (2) Trucks and boxes and other materials handling products.
Dan F. Dawson, Bruce King, George Janetos, Joe Pazdan.

Special Instruments Laboratory Inc. 127
Knoxville, Tenn.
(1) Beta ray evenness control for draw frame. (2) Electronic print cloth inspector. (3) Servo-Dial fibrograph. (4) Stelometer for determining strength and elongation of cotton fiber. (5) Port-Ar for rapidly determining fiber fineness.
Hugh G. Neil, Don L. Jackson, Tom Pace.

Square D Co. 847
Charlotte, N. C.
Control equipment for the textile industry including Mag-Eye proximity limit switch.
Irv Swanson, Charles Quentel, Bud Whitney, Hal Prescott, Len Murans.

A. E. Staley Mfg. Co. 412
Decatur, Ill.
Thin-boiling, thick-boiling and oxidized starches, gums and starches for enzyme conversion.
L. E. Doxsie, E. H. Grosse, F. J. Kekeisen, W. N. Dulaney, D. A. Barnes, H. A. Mitchell, H. H. Ecto[illegible], Crawford Garren, N. N. Harte Jr., L. J. McCall, B. O. Merritt Jr.

The Stanley Works Steel Strapping Division 461
New Britain, Conn.
Jet air power tools, an electric ski[illegible] magazine tool, an electric carbandin[illegible] tools and a power strapper.
J. C. McGunnigal, J. A. Dickson, T. P. West, C. J. Turpie, W. L. Polson, R. D. Burdette, R. F. Brown, C. H. Stephenson.

Steel Heddle Mfg. Co. 137
Greenville, S. C.
(1) Duplex drawtex heddle—duplexing principle applied to the mechanically entered type heddle. (2) Stedco-Southern filling bobbins. (3) Combination metal and pitch reeds. (4) Rigident reeds with new configuration of dent wire making for stronger cross section and allowing greater freedom of yarn passage. (5) Stehedco Loctite bolt and nut aid. (6) Various loom equipment including harness equipment, wood and plastic shuttles, drop wires and picker sticks.
H. W. Fehr, F. H. Kaufmann, A. J. Kieny, J. J. Kaufmann Jr., H. P. Goodwin, G. D. McGill, Sam Zimmerman Jr., Dave Batson.

Stein, Hall & Co. Inc. 427
New York, N. Y.
Reception booth.
Edwin Stein, Leonard F. Costello, Norman H. Nuttall, E. D. Estes, J. S. Benefield, E. P. Lavoie, H. Harrelson.

Sterling Engineering & Manufacturing Co. 216
Wilkes-Barre, Pa.
(1) Self-stacking boards of cadmium plated and stainless steel for handling bobbins, cones, tubes, quills, etc. (2) Aluminum quill boards and self-stacking tube boards with flexible holder for yarn shrinkage and yarn handling trucks.
George McGee.

Strandberg Engineering Laboratories Inc. 832
Greensboro, N. C.
(1) Auto count systems, centralized recording of loom picks automatically totalized by weaver assignments and automatic analyses of loom stops and speeds. (2) Chatham loom stop counter—records warp stops and filling stops. (3) New M-600 moisture control. (4) Model M-101 moisture monitor for pickers, calibrated in terms of "add to pan" weight and total re-

ired weight. Same model available r slashers, tenter frames and finishg machinery.
Charles F. Strandberg Jr., William Plemmons, F. Neal Houston, E. R. nd, John W. Foster, Carl B. Pederon.

uperior Bolster Co. 307
Gastonia, N. C.
pinning and twister bolsters and an nti-friction unit.
G. R. Currence, J. G. Patterson.

ykes Foundry & Machine Co. Inc. 146
East Point, Ga.

Sylvania Electric Products Inc. 421
Atlanta, Ga.
New industrial lighting fixtures and lamps.
P. P. Harrison, R. G. Slauer, R. C. Marshall, C. L. Woodyard, J. F. Hagan, H. R. McClellan, C. C. Beyer, J. E. Hall, K. B. Fletcher, J. J. Bunch.

Taylor Instrument Cos. 454
Rochester, N. Y.
The Taylor potentiometer transducer, new electronic transmitter, Sensaire temperature transmitter and other electronic and pneumatic instrumentation for the textile industry.
H. G. Olson, L. H. Van Huben, J. Barker, J. E. Burnett, H. M. Messenger, D. G. Warner, C. H. Miller, R. S. Peterson.

G. H. Tennant Co. 420
Minneapolis, Minn.
A variety of floor maintenance products.
R. F. Guthrie, G. D. Billings, W. Teague, W. Bostick, D. Peel, J. Foreman, F. Graham, L. Bass.

The Terrell Machine Co. Inc. 486
Charlotte, N. C.
(1) Termaco hopper feeders for automatically feeding bobbins to bobbin cleaning machines. (2) Termaco automatic conveyor system which allows bobbins to be conveyed to winder hoppers or other locations without the use of labor. (3) Schlafhorst Servoloom Autocopser which prepares bobbins for Draper automatic battery automatically. (4) Type L bobbin cleaning machine and Type M roving bobbin cleaning machine.
W. S. Terrell, Dr. Walter Reiners, R. Ferguson, J. R. Hartmann, J. F. Notman, J. E. Scott, Joe Bowler, M. H. Ridenhour.

The Texas Co. 448
New York, N. Y.
Various oils and lubricants for the textile industry including rust-proof oil, loom oil and spinning frame oil.
C. F. Walker, R. G. Mitchell, W. P. Camp, A. O. Mundy, J. M. Hackney, F. E. Rosenstiehl, A. C. Keiser Jr.

Texize Chemical Inc. 430
Greenville, S. C.
Softeners, binders, waxes, emulsions and general maintenance chemicals.
W. J. Greer, W. N. Kline Jr., Carl M. Chalmers, Joe A. McNeill, Ralph L. Parker, Walter M. Greer, Clarence A. Barrett, T. D. Greer, C. H. Crews Jr.

Texpak Plastics Inc. 319
Division of Cockery Mfg. Co.
Rockingham, N. C.
Polytomic plastic pickers and lug straps, laminated high density picker sticks, laminated medium density picker sticks and laminated sweep sticks. Also fiberglas doff boxes and plastic mouldings.
Nicholas W. Dockery, John C. Dockery.

Texplant Corp. 124
Stamford, Conn.
(See Textube Corp.)

Textile Bullettin 203
Charlotte, N. C.
Reception booth.
Junius Smith, Roy Carey, James T. Miller Jr., Jack Kissiah, Gus Guggenheim, John V. Lawing, Ben C. Thomas, Miss Sylvia Dabbs, Miss Frances Haywood.

Textile Electronics Inc. 462
Charlotte, N. C.
The Qualitex electronic slubcatcher will be displayed in operation. The size of slubs and other defects to be removed from the yarn may be selected quickly and easily through electronic controls.
James I. Teat, Charles D. Lee Jr., Ben H. Crawford, Hugh K. Smith, Marvin D. Lindsay, James O. Casey, Hendrik Glastra.

Textile Industries 408
Atlanta, Ga.

Textile Publications Service 273
Division of Jacobs Bros.
Clinton, S. C.
Manuals, posters, handbooks, publications, stickers, awards, etc., dealing with safety, good housekeeping, production, communications and policies in textile plants.
Hugh S. Jacobs, William P. Jacobs.

The Textile Shops 115
Spartanburg, S. C.
(Also representing Manton-Gaulin Mfg. Co. Inc.)

Textile World 224
New York, N. Y.

Textube-Texplant Corps. 124
Stamford, Conn.
Yarn carriers of paper, hardwood, plastic and metal for all purposes. Literature on Nissex card clothing, card grinding equipment, Fleissner dryers and Monforts nappers.
Albert J. Lindell, Paul Meyer, Jules P. Frattuno.

H. J. Theiler Corp. 823
Whitinsville, Mass.
A Staubli dobby head, a Loepfe optical electronic bobbin feeler and photos and a chart of a Benninger sectional warping machine.
O. Staubli, H. J. Theiler, H. Baderscher, H. S. Singer.

The Toledo Pipe Threading Machine Co. 141
Toldeo, Ohio
Pipe cutters, vise stands and vises and heavy duty drop-forged aluminum pipe wrenches. Also power pipe machines and power drives.
H. R. Strouse, James Emch, Fred Hetzel.

Toledo Scale Division 415
Toledo Scale Co.
Toledo, Ohio
(1) A portable cotton lap scale with automatic Printweigh which conceals weight until print is made and has a top-mounted power supply connection to permit movement of the unit along the picker line. (2) Representative models of the complete line of scales.
M. W. Mengal, H. B. Sanford, W. F. MacKinnon, W. S. Heape.

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The Greenville Show——

Ton-Tex Corp. 432
Englewood, N. J.
(See R. E. L. Holt Jr. & Associates)

Trion Inc. 317
McKees Rocks, Pa.
Trion electronic air cleaners including high capacity cells requiring 50% less space while giving efficiencies up to 97% and small commercial equipment designed to work in conjunction with 2 to 20 capacity air cooling systems.
E. W. Meyers Jr., J. W. Hall Jr., L. W. Kelley, W. C. Amos.

Trumeter Co. 227
New York, N. Y.
(1) SR-8 counter which consists of a quick reset counter with an inclined front and a long rod with a cloth measuring wheel on the end. (2) Trumeter with built-in totalizer and a new type of ticket printer registering the individual pieces of material.
Eric Seligman, A. Abel, Tom Aydelette, Fred Slaughter, R. Jacobus.

Union Bag-Camp Paper Corp. 350
New Lork, N. Y.
Standard and specially designed corrugated boxes.
J. W. Butler, F. B. Grimes, J. T. Hough, H. A. Murrill, R. C. Day, D. Ellis, R. W. Williams, T. J. Fahey, A. Smith, C. J. Corso.

Universal Winding Co. 810
Providence, R. I.

U. S. Bobbin & Shuttle Co. 125
Greenville, S. C.
Reception booth.
M. L. Johnston, C. W. Hite, J. C. Fulling.

U. S. Ring Traveler Co. 801
Providence, R. I.
Steel and bronze travelers in many sizes and styles.
Lester W. Doel, Herbert J. Smith, Oliver B. Land, Harold R. Fisher, Ray Borden, W. H. Rose.

U. S. Textile Machine Co. 835-A
Scranton, Pa.
(1) Single spindle unit, ideal for sample yarns. (2) Acme Jumbo texturizer—50-spindle machine for heavy deniers such as those used in tufted carpets. Produces large packages: 10" diameter, 10" traverse. (3) Feed roll and control clutch, highly polished aluminum feed rolls with positive action gear drive. (4) Mandrels—self locking with automatic release.
A. W. Thomas Jr., Don W. Scheuer, Pacific J. Thomas, C. H. White, Michael Turner, William Russell.

Uster Corp. 47
Charlotte, N. C.
(1) Uster lap varimeter with humidity compensator. (2) Uster automatic rewinding device. (3) Model C and universal evenness tester. (4) Linear and quadratic integrators. (5) Hy-Lo imperfection indicator. (6) Uster Spectrograph. (7) Automatic yarn strength tester. (8) Uster Custom Tension Recordograph.
Dr. Hans Locher, Dr. Benno Bissig, W. B. Floyd, Hans Winiger, Vernon Brockman, Jack Taylor, William Boyd, Burton Sweet, Aldo Broccari, James Wright.

Ira M. Valentine 106-A
Atlanta, Ga.
(Representing American Stock Gear, George P. Dorris Co., Ramsey Chain Co.)
(1) Stock and special gearing and speed reducers by American Stock Gear. (2) George P. Dorris speed reducers. (3) Card flat chain, silent chain, special sprockets, textile gear boxes, special gears for textile industry by Ramsey Chain Co.
Ira M. Valentine, Jesse B. Goodgame, A. G. Laughridge, Ray Whitney.

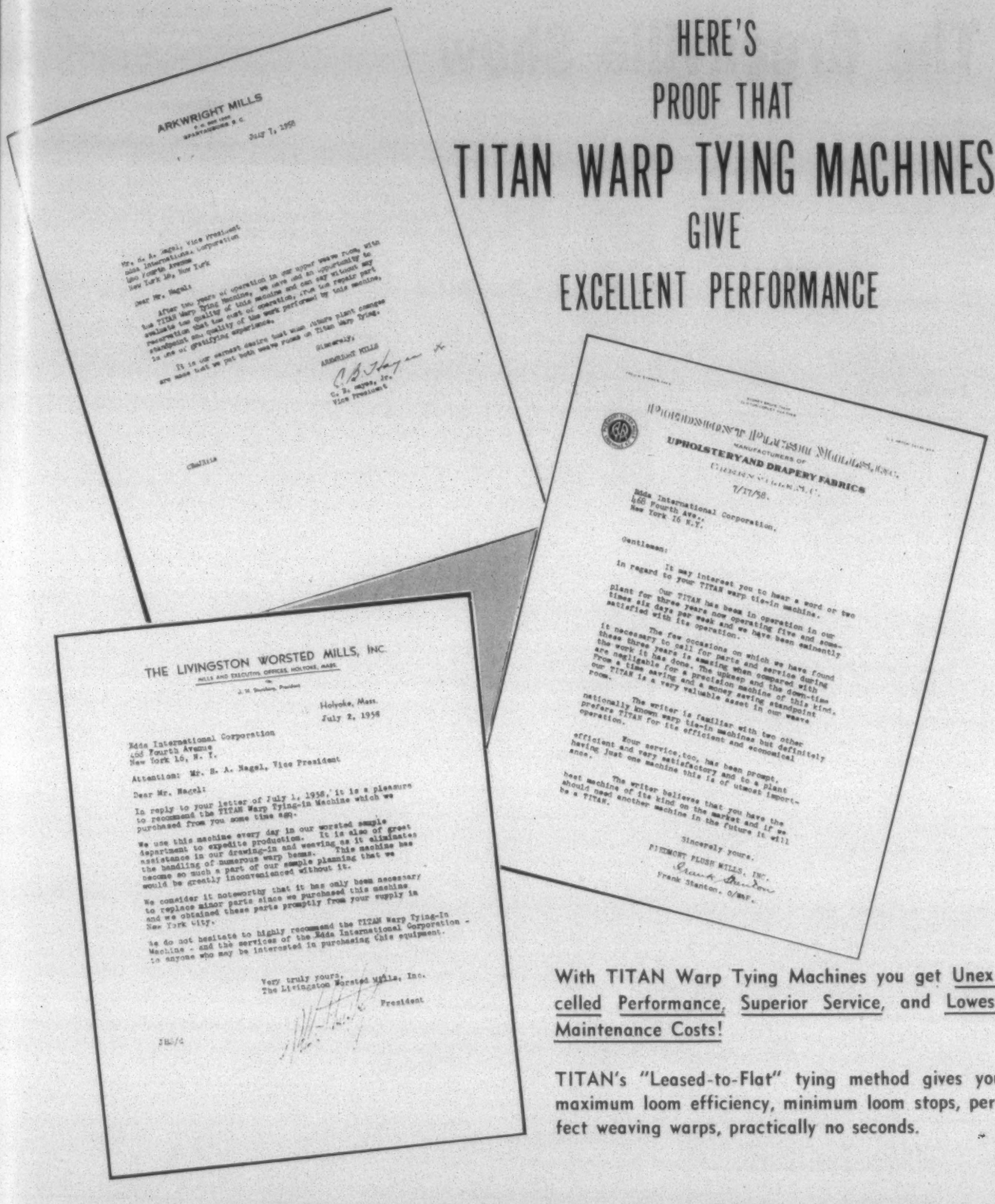
Valvair Corp. 318
Akron, Ohio
(See L. W. Kinnear Corp.)

Vaughn & Co. 335-A
Greenville, S. C.
Omark Drive-It power actuated tools and an Omark hammer-drive tool.
J. N. Vaughn, D. F. Vaughn, D. Norris.

Veeder-Root Inc. 107
Hartford, Conn.
(1) High speed quick reset predetermining counter for winding and other operations. (2) Direct reading high speed quick reset revolution counter which can be used directly on the in-

DAN RIVER MILLS RECENTLY COMPLETED the largest installation of electronic data processing equipment in the textile industry at its headquarters in Danville, Va. The $1 million IBM data processing center includes 17 separate machines, weighing 14 tons, all interconnected to operate as a single system. The "electronic brain" has over 7,000 vacuum tubes, almost 7,000 diode tubes, operates at 17 different voltage levels, and has more than 3,600 magnetic cores in which to store information. In a matter of minutes it can provide Dan River's management information which formerly would require hours, days or even weeks to compile. Programs have already been developed for using the new system to provide statistical data on production, inventory, supply control, payrolls and other related accounting functions. Dan River's New York sales headquarters will receive current information on the progress of fabric orders in production, finished goods available for sale, and projections as to styles and patterns available at later specified dates. Additional programs are under study, and will be incorporated into the system as rapidly as possible. IBM trained Dan River personnel will be responsible for programming and operating the computer center; maintenance will be handled by IBM engineers assigned to the installation.

HERE'S PROOF THAT TITAN WARP TYING MACHINES GIVE EXCELLENT PERFORMANCE



ARKWRIGHT MILLS

July 7, 1958

Mr. H. A. Nagel, Vice President
Edda International Corporation
468 Fourth Avenue
New York 16, New York

Dear Mr. Nagel:

After ten years of operation in our upper weave room, with the TITAN warp tying machine, we have had an opportunity to evaluate the quality of this machine and can say without reservation that the cost of operation, plus the repair part standpoint and, quality of the work performed by this machine, is one of gratifying experience.

It is our earnest desire that when future plant changes are made that we put both weave rooms on Titan warp tying.

Sincerely,

ARKWRIGHT MILLS

C. B. Hayes, Jr.
Vice President

Charlie

THE LIVINGSTON WORSTED MILLS, INC.
MILLS AND EXECUTIVE OFFICES, HOLYOKE, MASS.

J. M. Stuchbery, President

Holyoke, Mass.
July 2, 1958

Edda International Corporation
468 Fourth Avenue
New York 16, N. Y.

Attention: Mr. H. A. Nagel, Vice President

Dear Mr. Nagel:

In reply to your letter of July 1, 1958, it is a pleasure to recommend the TITAN Warp Tying-in Machine which we purchased from you some time ago.

We use this machine every day in our worsted sample department to expedite production. It is also of great assistance in our drawing-in and weaving as it eliminates the handling of numerous warp beams. This machine has become so much a part of our sample planning that we would be greatly inconvenienced without it.

We consider it noteworthy that it has only been necessary to replace minor parts since we purchased this machine and we obtained these parts promptly from your supply in New York City.

We do not hesitate to highly recommend the TITAN Warp Tying-In Machine - and the services of the Edda International Corporation - to anyone who may be interested in purchasing this equipment.

Very truly yours,
The Livingston Worsted Mills, Inc.

President

JH:/d

UPHOLSTERY AND DRAPERY FABRICS

7/7/58.

Edda International Corporation,
468 Fourth Ave.,
New York 16 N.Y.

Gentlemen:

It may interest you to hear a word or two in regard to your TITAN warp tie-in machine.

Our TITAN has been in operation in our plant for three years now operating five and some times six days per week and we have been eminently satisfied with its operation.

The few occasions on which we have found it necessary to call for parts and service during these three years is amazing when compared with the work it has done. Amazing when compared with are negligible for a machine of this kind. From a time saving and a precision standpoint our TITAN is a very valuable asset in our weave room.

The writer is familiar with two other nationally known warp tie-in machines but definitely prefers TITAN for its efficient and economical operation.

Your service, too, has been prompt, efficient and very satisfactory and to a plant having just one machine this is of utmost importance.

The writer believes that you have the best machine of its kind on the market and if we should need another machine in the future it will be a TITAN.

Sincerely yours,

PIEDMONT PLUSH MILLS, INC.

Frank Stanton, G/Mgr.

With TITAN Warp Tying Machines you get Unexcelled Performance, Superior Service, and Lowest Maintenance Costs!

TITAN's "Leased-to-Flat" tying method gives you maximum loom efficiency, minimum loom stops, perfect weaving warps, practically no seconds.

See TITAN Warp Tying Machines, and the EXCELSIOR Reed Cleaner & Polisher, in operation at the SOUTHERN TEXTILE EXPOSITION, (October 6-10), Greenville, S. C., Booth No. 503.

TITAN

EDDA INTERNATIONAL CORP.

468 FOURTH AVE., NEW YORK 16, N. Y. CALHOUN TOWERS, GREENVILLE, S. C.

The Greenville Show——

spection table. (3) A variety of other counters including pick counters and hank counters.

G. H. Anthony, A. E. Kallinich, T. Nelson, F. J. Swords, R. C. Conant, H. E. Mansfield.

Vermont Spool & Bobbin Co. 128
Burlington, Vt.
(See Watson & Desmond)

Victor Ring Traveler Co. 835
Division of Saco-Lowell Shops
Providence, R. I.
(See Saco-Lowell Shops)

WAK Industries 335
Charlotte, N. C.
Electric repeat, shift, clutch and impulse counters and remote yardage electrical impulser. Also hank clocks, pick counters and ratchet counters.

James H. Dougherty, J. L. Cole.

Walworth Co. 352
New York, N. Y.
(1) Valves of rigid polyvinyl chloride (PVC), a plastic with high corrosion resistance to dyes. (2) Representative items from the firm's line of bronze, iron, steel and special alloy valves and fittings.

L. J. Parsons, S. D. Enright, E. W. Edgerton, B. R. Harwell, L. P. Williams, J. J. Burke, W. A. Austin, R. E. Engley, M. H. Luttrell, G. R. Thomson, R. L. White.

Warner & Swasey Co. 834
Cleveland, Ohio
(1) New M-3700 pin drafter intersecting draw frame with ball delivery. Input potential of 75 oz./5 yds. is reported for the machine. The pin drafter system will demonstrate the handling of eight ends up of 3 oz. top, drafting 8 and delivering a 3 oz. top. The ball delivery head will produce 18x24" balls up to 50 lbs. each. (2) A new longitudinal ball creel accommodating 12 18x24" packages will feed the drafter 60s wool with 1—1½% antistatic compound. The creel incorporates a new mercury-type stop motion. (3) A 20" can coiler and turntable delivery system.

T. L. Stilwell, A. F. Barney, H. K. Jennings, R. E. Schuelke.

Watson & Desmond 128
Charlotte, N. C.
(Representing New England Paper Tube Co., Progressive Engineering Inc., Textube Corp., Vermont Spool & Bobbin Co., Wat-Des Corp. and Zinser.)
Paper spinning tubes and quills, wooden bobbins, cones and spools, plastic quills, shuttle fur, paper dye tubes, headless shipping packages, Maier Prima flyers, R&F spinning and twisting rings, Toenniessen yarn inspection machine, Dubo spindle lockwashers, SKF spindles, anti-friction top rolls, roll maintenance equipment and drafting system.

Pat Desmond, C. Watson, Dick McPhail, John Wyatt, Ralph Patton, Ed Ball, Dorsey Lanier, Jesse Dodgen, Jerry Olwell.

Wat-Des Corp. 128
Charlotte, N. C.
(See Watson & Desmond)

Watson-Williams Mfg. Co. 128
Millbury, Mass.
(1) A new shuttle. (2) Lundstick densified picker sticks.

Hubert J. Watson, J. Kimball, John Wyatt, Ralph Patton, Ray Norman, Clifton E. Watson, S.P.V. Desmond, R. V. McPhail, Dorsey Lanier.

West Chemical Products Inc. 340
Richmond, Va.
A variety of cleaning and maintenance products including floor cleaners, disinfectants, soaps, paper towels, floor machines, insecticide spraying equipment and Vacmobile for wet or dry pick-up.

H. W. Anderson, C. F. Powell, J. F. Manning, G. C. Wagoner, E. G. Fowler, E. B. Messer.

Westinghouse Air Brake Co. 366
Industrial Products Division
Wilmerding, Pa.
(See Livingston & Haven)

Westinghouse Electric Corp. 423
East Pittsburgh, Pa.
(1) AV-R reactifier drive, a compact adjustable speed system for driving d.c. motors from an a.c. power source. (2) DynAC controller for the electrical braking of a.c. motors. (3) Type EP transformer. (4) A variety of electrical items including a clutch brake loom motor and starter, Type E transformer, enclosed motors, etc.

C. Y. House, J. O. Buchanan, W. W. Ballew, J. W. Rigdon, F. T. Benner.

Westinghouse Lamp Division 40
Bloomfield, N. J.
(1) Rayescent phosphor-type, relatively heatless lighting. (2) Cool green fluorescent lamps. (3) Super high output fluorescent lamps.

J. W. Johnston, J. F. Baker, Roy D. Thornton Jr., J. D. Mitchell, R. A. Corvey.

West Point Foundry & Machine Co. 820
West Point, Ga.
Slashers and finishing equipment.

R. L. Mundhenk, R. V. Lee, C. G. Holt, Bonner B. Brown Jr., R. C. Monk, E. B. Morrison.

Wheel Trueing Tool Co. 110-B
Detroit, Mich.
(See George H. Pennell Co.)

Whiting Products Co. 323
Camden, S. C.
Photographs of spooler-conveyor installations.

J. H. Harmon, W. S. Whiting.

Whitin Machine Works 804
Whitinsville, Mass.
The new Piedmont spinning frame. The frame is 27" wide and features a single spindle side shaft drive which eliminates cylinders and tapes. A new type of builder motion with change gearing is enclosed in the head end. Whitin Super-Draft two apron drafting system is employed in an arrangement which provides straight line spinning supplemented by balloon control rings.

J. Hugh Bolton, E. K. Swift Jr., J. H. Bolton Jr., R. I. Dalton Sr., R. I. Dalton Jr., R. J. McConnell, J. L. Orr, L. M. Hair, R. W. Dunn, J. Valvert, B. B. Peacock, W. G. Stainton, O. G. Murphy, H. B. Patterson, W. V. Byers, E. M. Kennedy, H. W. Keeler, H. T. Heathcote, W. J. Dunleavy, G. F. McRoberts, J. R. Sanderson.

Whitin Machine Works 508
Parts Department
Charlotte, N. C.
Repair and replacement parts and changeover equipment.

R. W. Rawlinson, R. J. Cunningham, B. C. Grieb, R. Taylor, J. F. Sumner, W. E. Cole, D. Elms, J. D. Stone, C. M. Banks, R. F. Long and E. Hemphill.

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The Greenville Show——

Whitinsville Spinning Ring Co. 209
Whitinsville, Mass.
(1) New Anti-Wedge flange ring designed for use with elliptical travelers. (2) A complete line of diamond finish spinning and twister rings, holders and accessories.
William P. Dutemple, George T. Brown, William K. Shirley.

T. B. Wood's Sons Co. 242-B
Chambersburg, Pa.
Sure-flex couplings, motion control sheaves, timing belt drives, variable pitch sheave, card drive, and Life-Lube ball bearings.
C. O. Wood, Jr., G. M. Henderson, R. C. Reese, E. L. Nuernberger, Joseph Seawell Jr., E. R. Kleinlein, B. W. Parsons, C. R. Shank, R. C. Rotz.

Woonsocket Napping Machinery Co. East Lounge
Woonsocket, R. I.
Andrew McGoldrick.

World Dryer Corp. 220
Chicago, Ill.
(See Batson Mfg. Co.)

Wrenn Bros. 485
Charlotte, N. C.
(Representing The Colson Corp., Hyster Corp.)
Hyster fork lift trucks for beam handling, narrow isle cotton storage and other purposes and Colson casters, floor trucks and specialized lifters.
George Wrenn, Paul Wrenn, Bill Hammond, Lamar Bagwell, W. T. Griffith, Cheves Ward, Dan Dougherty, Pat Pfeifer, Xyl Cail.

Yale & Towne Mfg. Co. 826
Philadelphia, Pa.
(See Coleman Co. Inc.)

At Your Service

Staff members of TEXTILE BULLETIN will be on hand at Booth No. 203 throughout the Greenville Show to serve you in any way possible. Drop by for a chat or a favor. We'll be delighted to have you.

Yeomans Textile Machinery Co. 45
Spartanburg, S. C.
(1) Scharer automatic bobbin winde for filament rayon with pinboar stacking device. (2) Automatic bobbi winder for general use. (3) Automat bobbin winder for use with Drap Corp.'s bobbin loading machine. (4 Air-Loc machinery mounting pads.
Jacques Scharer, Kaspar Laage Otto Zollinger, Charles L. Yeoman Charles H. Turner, Roland McDer mott, Robert Schmitt.

F. A. Young Machine Co. 25
Gastonia, N. C.
The Vertical Y spinning frame wit anti-friction bearings. The new 24 wide spinning frame is equipped wit anti-friction vertical straight lin drafting from the creel to traveler. It will double creel 12x7 bobbins or ca be converted to use drawing sliver from cans drafting as high as 200, creeling from 12x7 bobbins with a draft as high as 75. The Vertical Y uses bobbins to take a 12" stroke. It is equipped with vacuum cleaning.
F. A. Young, E. T. Hayes, C. J. Webster, A. J. Haselden, B. K. Wright, J. E. Lindsay Jr.

Zinser 128
Charlotte, N. C.
(See Watson & Desmond)

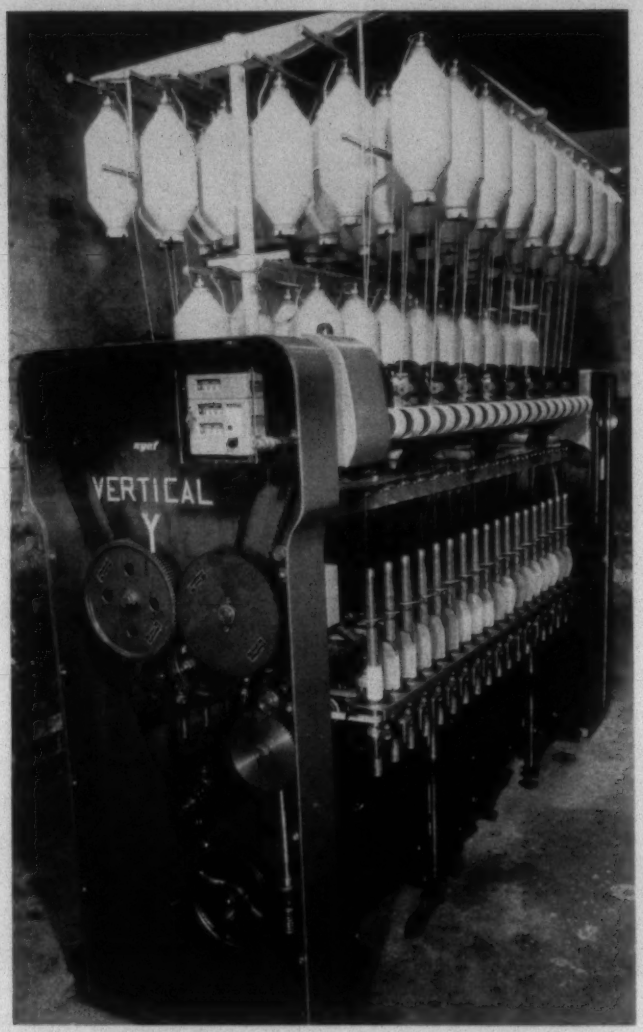
F. A. YOUNG MACHINE CO.

PRESENTS

THE VERTICAL **Y**

SEE IT AT THE TEXTILE SHOW OCT. 6-10, in GREENVILLE AT OUR

BOOTH 257-258



NEW 24" WIDE VERTICAL "Y" SPINNING FRAME

TOMORROW'S FRAME TODAY

RUGGED DESIGN

POSITIVE CONTROL

INTRODUCING:

- STRAIGHT LINE DRAFTING FROM TRUMPET TO TRAVELER.
- CREELING FROM 12 X 7 BOBBINS.
- UNIQUE DESIGN OF STANDS, IN RELATION TO BOBBINS WITH DRAFT RANGE 10-70; ANY LENGTH BOBBIN UP TO 12 INCH STROKE.

SIMPLEX DRAFT GEARING ELIMINATES 50% OF GEARS.

COMPLETELY ANTI-FRICTION FROM FLOOR UP.

F. A. YOUNG MACHINE CO.

QUALITY & SERVICE Y MINIMUM COST

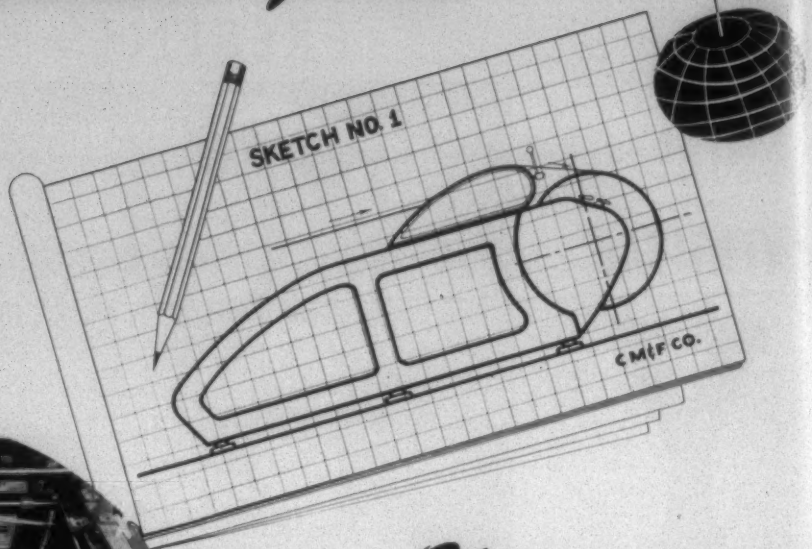
Telephone UNiversity 5-8556 — *GASTONIA, NORTH CAROLINA*

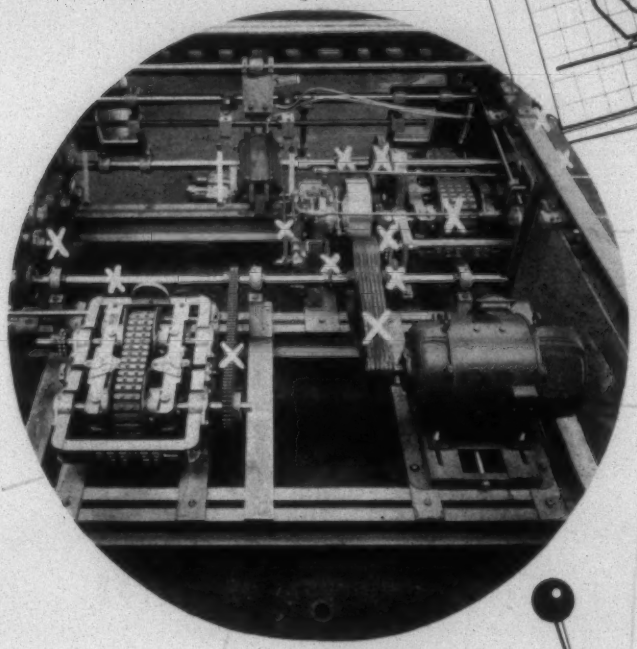
FLUTED ROLLS FOR SPINNING • FLYER FRAMES • COMBERS • DRAWING & LAP MACHINES • NYAF

Another Cocker First

Cocker was First with

- Multiple Cylinder Slasher for Cotton
- Finger Tip Stretch Control
- Mechanical Compensating Beam Drive





X THESE PARTS ARE ELIMINATED

GREENVILLE

Now First with Slasher Torque Tube Drive

Lower Initial Cost
Less Maintenance
Highest Operating Speed
Fast Simple Doffing
Easy Adjustment for Beam Width
Self Locking Driving Head
Convenient Controls
Clean Modern Design

See this New Cocker Torque Tube Drive at Sections 836 and 837 Southern Textile Exposition

In Canada and New England:

Contact W. S. Clark, Montreal, Canada
Melrose 1-3751

THE LEADER COCKER AROUND THE WORLD

Machine & Foundry Co., Gastonia, N. C.

Plant and Offices at Ranlo, N. C. (Mailing address, Gastonia, N. C.)

WORLD'S LARGEST DESIGNERS AND BUILDERS OF COMPLETE WARP PREPARATORY EQUIPMENT

REINER

offers 2 outstanding clothroom machines

Menschner

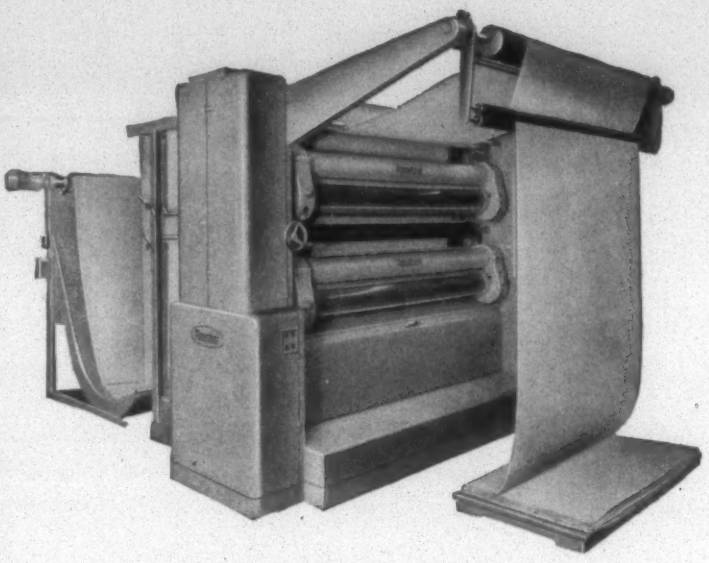
HIGH SPEED BRUSH & SHEAR (Model SPS)—one machine providing 3 operations:

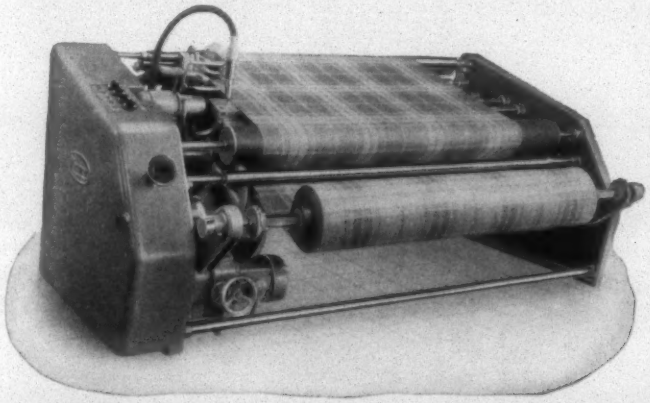
LOOP OPENING—BRUSHING & CLEANING—VERTICAL SHEARING (with J-Box for continuous operation)

Features:

- Automatic Loop Opening Device (2 or 4 selvages).
- Up to 6 Cloth Scraping, Cleaning and Brushing Rolls for removing dust, dirt, leaf and other foreign matter.
- Production up to 200 linear yards per minute (in parallel operation).
- Multispeed motors drive up to 4 knives individually.
- Maximum suction efficiency provided at shearing point by dual-purpose suction and knife holder tubes.
- Exceptionally sensitive detector automatically stops and starts each knife motor individually — in sequence — permits shearing to within 8" of seam.
- Central control for all cleaning and shearing settings and adjustments.
- Automatically controlled shear cylinder lubrication.

Write for Complete Details





Menschner

Automatic SELVAGE TRIMMER & LOOP CLIPPER (Model SRS)

Features:

- Automatic Selvage Guider (unaffected by tension, width, or cloth winding).
- Unexcelled results at proven and practical mill speeds.
- Trims only (one or two) selvages—will not damage nubbed or other fabric textures.
- Built-in suction device provided at shearing point, assures complete shearing effect.
- Shears all weights of fabrics from lightest to heaviest upholstery fabrics, Fiberglas, etc.
- For any diameter rolls—in all commercial widths.

Complete Details On Request

Reiner also offers a Carpet Shear—as well as other *Menschner* machines for inspection, making-up, doubling, rolling, printing, marking, sizing and back coating, combing, calendering and palmering, sueding, etc.

Write for detailed literature:

ROBERT REINER INCORPORATED

10 MINUTES FROM TIMES SQUARE

Take Bus Nos. 61 or 67, from Platform No. 60, Port Authority Bus Terminal, 41st Street and 8th Avenue, New York City. Get off at Pleasant Avenue, Weehawken, New Jersey. From there turn left and walk through the underpass up to Gregory Avenue . . . TELEPHONE: UNION 7-0502, 0503, 0504, and 0505. From New York City call LONGACRE 4-6882.

FOUNDED IN 1903 **550-564 GREGORY AVENUE, WEEHAWKEN, NEW JERSEY**

AN HONORED NAME IN TEXTILE MACHINES SINCE 1903

AT THE GREENVILLE TEXTILE SHOW

AT BOOTHS 432-436

Where you will see displayed the products featured on these pages.

We invite you to witness the running

of a

DYNAMICALLY BALANCED

Aluminum Textile Beam

in Sections 435-436

in Annex 1

at The Southern Textile Exposition

HAYES INDUSTRIES, INC.

Jackson, Michigan

Factory Representatives:

Bill Maxson, Warren Sharp
Dick Richards

Southern Representatives:

R. E. L. Holt, Jr., & Associates

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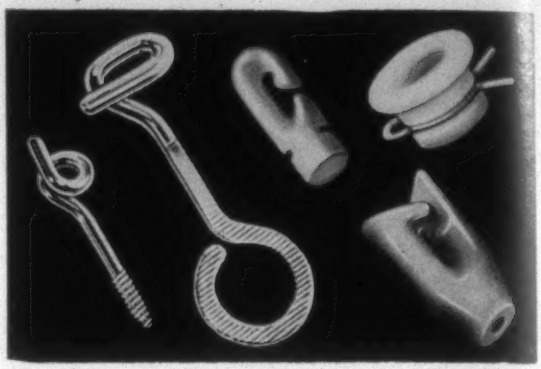

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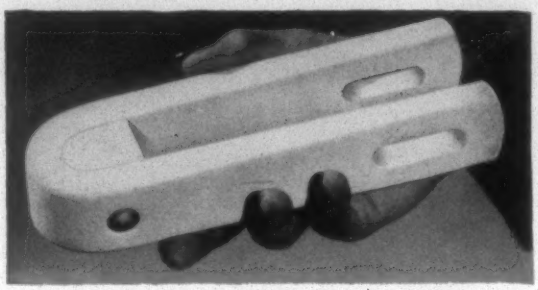

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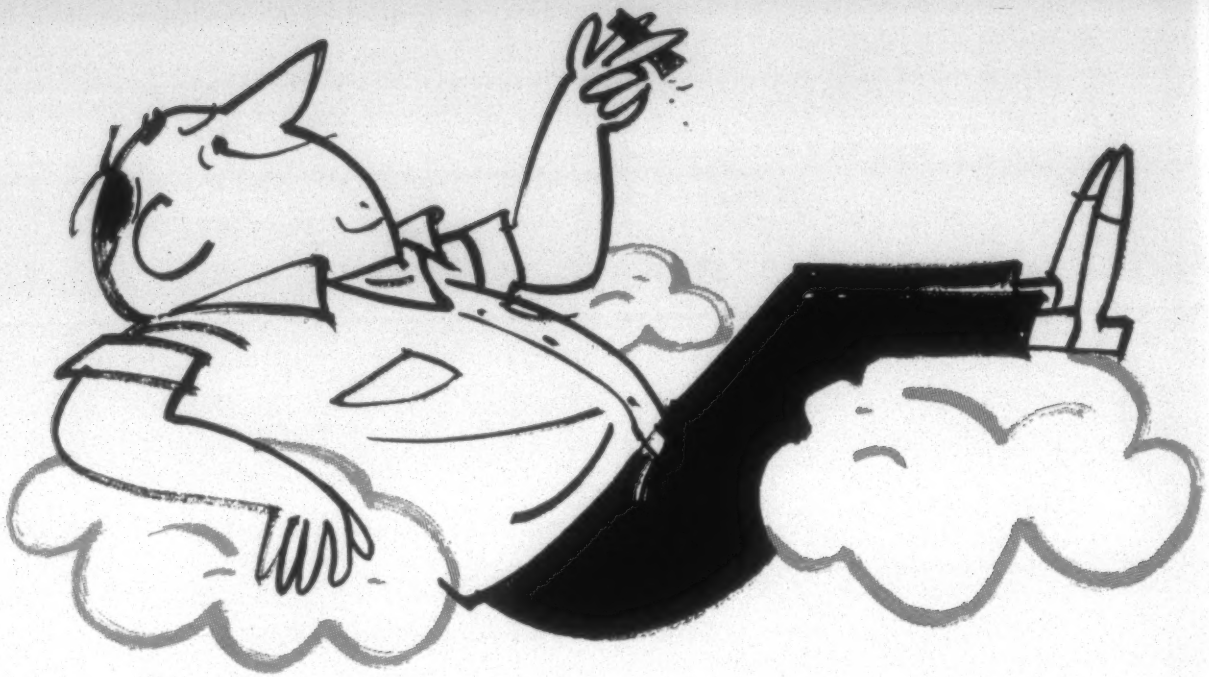

Picture of a mill man making equipment changes to run

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Donald Comer Hugh Comer

The Governor's Boys

The story of Avondale Mills, with nine plants in seven Alabama communities, is the story of an astute, hard working family named Comer which 61 years ago went into the textile industry to stay. The firm was founded in 1897 by Governor B. B. Comer, who served as its president until his death in 1927. Following him have been his three sons — Donald, Bragg and Hugh—and his grandson, J. Craig Smith. Each would serve as notable subjects for extensive biographical offerings. Ambitious, indeed, would be a lone offering such as this which attempted to sum up the lives and careers of them all. This piece, instead, seeks only to draw somewhat of a comparison between Brothers Donald and Hugh; and to delve ever so superficially into their contributions to the mills and those connected with them. While not the full story of the Comer brothers, by any means, it does offer a few highlights, with some amusing sidelights thrown in.

By WILLIAM G. IRBY

DONALD COMER, chairman of the executive committee of Avondale Mills, is a man with many interests, many titles. Aside from Avondale's top post, he also serves as chairman of the executive board of Avondale Mills Inc., the mills' selling house; and chairman of the board of Cowikee Mills Inc. He was named "Man of the South" in 1947, is a member of the Birmingham Rotary Club, and serves as vice-president of the American Bible Society. The scope of his interests is indicated by the variety of board seats he holds: American Mutual Insurance Co., Boston; Coosa River News Print Co., Coosa Pines, Ala.; Central of Georgia Railway, Savannah; Federal Reserve Bank of Atlanta; Birmingham Fire Insurance Co.; Home Federal Savings & Loan Association, Birmingham; Sylacauga Federal Savings & Loan Association; St. Clair Federal Savings & Loan Association, Pell City, Ala.; Ocean Steamship Co. of Savannah; and the Young Men's Christian Association of Birmingham.

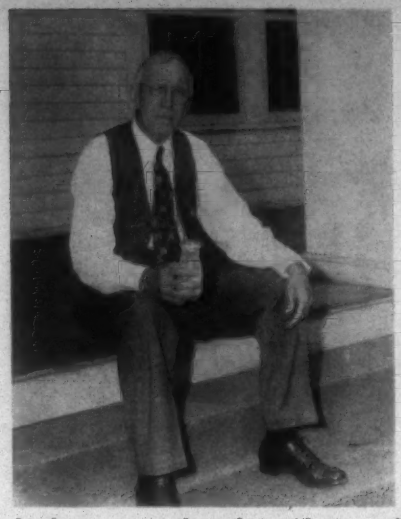
With more than a half-century of mill management behind him, Donald Comer has won as much respect and admiration from his employees as has the head of any company in any field. He's known as "The Boss," and the term carries more affection than affliction. He was born and grew up on a South Alabama cotton plantation. He joined the Army in 1898, served in the Philippine Islands, and returned home to till the soil. But his father, Governor B. B. Comer, founder of Avondale Mills in 1897, had other ideas for his son, and he sold young Donald on making a career for himself in the textile industry. Thus was launched a career without which Avondale Mills would very likely have suffered greatly.

Always known as a sedate, serious minded person, Donald Comer holds that whatever we believe today had something of its beginning back in our childhood. And one of the most pleasant of his childhood memories was the spending of the Sabbath. With the Comer family, Sunday has always been a day set apart. Years ago the family drove five miles by carriage to Spring Hill to attend a church built by Mr. Donald's grandfather. Sunday afternoons were devoted to Sunday school, and one of Mr. Donald's earliest recollections was of his mother playing the organ and leading the singing. The first hymn he remembers, and still his favorite, was "Wonderful Words of Life." His father was superintendent and taught the men's class. In later years, the family moved to Anniston and then to Birmingham, and in each the Comer family went to both Sunday school and church the first Sunday there.

Live And Help Live

Today Mr. Donald still recalls a passage from the Bible in which Joshua, after he crossed the Jordan into the Promised Land, gathered the children of Israel together and told them, "Choose ye this day whom you will serve, but as for me and my house, we will serve the Lord." He has always felt that his father had made such a promise, and that, as the eldest son, it lies with him to sustain the Gov-

Donald Comer, who wanted to be a farmer, is chairman of Avondale's executive committee. Members of the company's management team affectionately refer to him as "The Boss."



The Comer brothers concern themselves with every phase of the Avondale operation. Here Donald Comer takes a breather in the course of one of his mill tours.

ernor's will. And thus through the years the family's devotion to the Bible and to the church have led to Mr. Donald's paraphrasing of the old adage, "Live and let live" to one of "Live and *help* live." One of his fondest accomplishments has been the opportunity to follow in his father's footsteps by serving as superintendent of the First Methodist Sunday School in Birmingham.

Mr. Donald regularly writes a column for the company publication, *The Avondale Sun,* first issued from Birmingham in 1923. Since beginning a series he titles "Donald Comer Writes," he's never missed an issue. Once, in the '40s, when he was too sick to get out of bed, he dictated his copy to a secretary. He thought so highly of his editorial responsibilities that he influenced J. Craig Smith and Brother Hugh to join in them with him, the former turning his pen to the editorial page, the latter turning the safety page into one of the paper's most widely read features.

A part of Avondale's creed as expressed by Mr. Donald is: "The function of industry is to take certain things that grow on the surface of the earth, or are buried beneath the surface, and convert them into sizes, shapes and colors that the public wants; and to do this without any exploitation along the route."

Partnership With People

This philosophy serves, too, as a basis for his lifelong aim toward getting more people to live more abundantly. "Every man should have his own beehives for honey and his own fig tree to sit under to enjoy the shade and the fruit." Devoted to his associates, his employees and to the communities in which they live, Mr. Donald has always concerned himself with the elevation of the individual as a means of elevating his environment. It was his belief years ago that some system of profit sharing would achieve both these ends. Avondale took its first step in this direction in 1938, and by 1941 Mr. Donald's "partnership with people" was in effect in all the company's plants, with employees drawing profit-sharing checks amounting to 40 per cent of their base pay during some years.

This same spirit of "partnership with people" was applied to other phases of Avondale activity as well. At one time there was only a handful of home owners on th Avondale payroll. Hundreds of employees couldn't read write. Mr. Donald did something about both, and tod more than 85 per cent of Avondale employees own the own homes, and nobody in the mills today has to sign h pay check with an X.

Very probably there never has been a company with profit-sharing program that hasn't been charged with adop ing the plan for the purpose of keeping out organize labor. The same suggestion was made to Mr. Donald fo lowing publication in the daily press of a picture showin him signing the first million dollar check to go into th profit-sharing fund. "If that were our only reason for profi sharing," he quickly replied, "I'd object strenuously be cause that's a hell of a price just to keep out organizers."

HUGH MOSS COMER, chairman of the board of Avondale Mills, was born in Birmingham in June of 1892. Following graduation from the University of Alabama in 1914, he joined Avondale and began working his way through the mill. In 1927, the year of his father's death, he was named vice-president and director of the company. He was named executive vice-president in 1940; was elected president and treasurer in 1945; and became chairman of the board in 1951. He is also president and director of Comer-Avondale Mills Inc. and vice-chairman of the board and director of Avondale Mills Inc.

Like Mr. Donald, Colonel Hugh (the title is honorary) has held a number of top posts in various civic and business organizations. He is a past president and director of the American Cotton Manufacturers Association; past president of the Alumni Association of the University of Alabama; a past national vice-president and director of the National Association of Manufacturers; and a past director of the

Mr. and Mrs. Donald Comer.

National Cotton Council of America. He also served as a cavalry lieutenant with the Army during World War I.

Currently Hugh is a member of the National Executive Committee of the Boy Scouts of America and president of the Choccolocco Council of Boy Scouts; a director of the Southern Research Institute at Birmingham; director of the First National Bank of Birmingham; director of Allis-Chalmers Mfg. Co., Milwaukee, Wisc.; director of the Illinois Central Railroad; a member of the Exchange Club of Sylacauga; an honorary member of the Sylacauga Rotary Club, Future Farmers of America and the Alabama State Parent-Teachers Association.

Hell On Wheels

Contemporaries of the Colonel, in recalling the days when Hugh was a youngster, are likely to tell you: "Hugh was a card. You might say he was hell on wheels!" He'll tell you himself he was the only guy he ever knew of that graduated from the University of Alabama while the ink on the diploma was still wet. As for his Army career, it is said that his outfit was made up of the best scroungers ever seen overseas, and that his unit enjoyed luxuries that would do honor to TV's Sgt. Bilko.

Hugh is a born comedian who seems to appeal to just about everybody. At times he will go to great lengths to get his audience laughing. On other occasions he finds it hard to deliver a serious point. Once while speaking to a group at the Waldorf-Astoria in New York City, he was pointing out the importance of thrift and economy in running a business. To emphasize his point, he stated that the tuxedo he was wearing was only a hand-me-down that had been patched many times. To prove it, he turned his back to the audience, flipped up the tail of his coat and bent over to show the patches in the seat. An alert photographer caught him in the act and the demonstration made the front page the next morning.

Hugh M. Comer is shown crowning a county Maid of Cotton, Annie Ruth Estes, at Sylacauga, Ala.

A natural comic, Hugh Comer, chairman of the board of Avondale, once said: "I didn't know how old I was getting to be until I went to the barber shop and had more hair cut out of my ears and nose than off the top of my head."

At a recent company safety meeting, Hugh dropped in unexpectedly and the program chairman thought he'd honor him by letting him introduce the speaker. He handed Hugh a couple sheets of paper bearing the speaker's name, degrees, accomplishments, etc. But Hugh, supposedly not realizing what he had been handed, got up and introduced him thusly: "All of you have heard about the fellow who was so well known that he didn't need any introduction? Well, I certainly hope this is the case because I don't know this guy from Adam's off-ox!"

The Governor's Influence

Like Mr. Donald, Hugh was tremendously influenced by his father. One of Hugh's first jobs with Avondale was cotton weighing. In those days farmers brought their cotton directly to the mill and were paid for it by what the scales showed. One day when Hugh was working on the weighing platform alone, he looked up to see his father at his elbow looking over his shoulder. And Hugh still remembers what the Governor said to him at that moment. "Hugh, always weigh all of your cotton just like you would if the man that owned it was looking over your shoulder."

There is also evidence that Hugh influenced the Governor. The Governor at one time bought a tremendous amount of cotton out-of-state at a fantastically low price. The only thing wrong with it was that it changed the color of the cloth and wasn't easy to run. Hugh hit on the idea of mixing it with some of the better cotton in a blender he had built himself (the first blender in Avondale). Soon he was having such amazing luck that the Governor came to congratulate him and, parenthetically, to suggest that he put more of the cheap cotton in the mix in order to get it through the mill as quickly as possible. But Hugh thought he was putting enough of the cheaper cotton in each mix and said so. The Governor didn't think so and said so.

"All right," asked Hugh, "how much more shall I put?"

"I don't know," the Governor replied. "What do you think?"

"I think we got enough already!"

"Well, I don't!"

"Well, how much more?"

"I don't know. How much do you think?"

"I think we got enough!"

By this time the Governor's face was purple with r[illegible]. "I ought to kick you off this platform."

"All right," said Hugh, bending over, "kick!"

Hugh also remembers the time when he almost got fi[illegible] after his father got a letter from the president of a comp[illegible] that bought Avondale waste. The letter thanked the G[illegible] ernor for the high quality waste Avondale had been sh[illegible] ping. Hugh, of course, was in charge of waste sales.

Needless to say, Hugh has learned a lot about wa[illegible] since then. In fact, there isn't much he doesn't know abo[illegible] a cotton mill. He started early and is still going strong. [illegible] still has a letter that he wrote to his mother in 1901: "I am nine years old today and I am running four sides [illegible] spinning frames."

As a top notch mill man, he doesn't believe there's a[illegible] such thing as a free lunch. "Do it," he says, "before y[illegible] *have* to do it." He often says, "I'm no long-haired d[illegible] gooder. I believe in a good healthy attitude of selfishnes[illegible] . . . I expect a profit from everything I do. . . ." One of his favorite quotes is from 'Boss' Kettering: "My interest is in the future because I'm going to spend the rest of my life there."

AVONDALE MILLS has come a long way since 1897. Playing no small part in its success has been the careful attention the Comer brothers have given to every detail of the business. They concern themselves with every phase of the Avondale operation. Even in the company's sales offices across the country, they know far more about their sales staff than most textile executives. In the mills, they see to it that the Avondale slogan is never forgotten: "The production of this mill is as good as the best and better than the rest." They never have to ask a superintendent how he's getting along—they tell him.

Hugh holds the belief that "Mechanization creates efficiency; efficiency creates profits; profits create wealth; and wealth creates jobs." To this end, Avondale is never reluctant to adopt new practices and techniques, and millions of dollars have been spent to keep the company competitively on its toes.

Hugh Comer is a disciple of the doctrine that 11 times 96 cents is better than ten times a dollar. He holds that quality must constantly be increased, costs constantly decreased. Competition must be met by selling good material at a profit; selling as low or lower than competitors can offer it, not by sacrificing quality but by lowering the unit cost of production.

Despite the outward differences between Mr. Donald and Colonel Hugh—the former always of a serious mind, the latter a born comic—they are actually closer to being two men with one mind than the foregoing would lead you to suspect. They've been pulling on the oars together for more than 50 years; and the boat is yet to rock. This singleness of purpose is something else they got from their father. The story goes that the Governor once sent Hugh as a young man to Eufaula to bring a calf some ten miles back to the plantation. Hugh had a Negro to help him, but the calf was obstinate. It took all day, all night and late into the next morning to get the yearling home. Hugh was wearily making his way from the pasture to the house when Governor Comer came rushing out to meet him urgently demanding, "Where's that calf?"

A Mechanical Device For Measuring Yarn Diameter

By C. B. LANDSTREET
Cotton Technologist
U.S.D.A. Spinning Laboratory
Knoxville, Tenn.

This article describes a newly developed instrument for accurately determining the diameter of yarns. Mr. Landstreet not only describes the operation of the instrument and furnishes detailed illustrations of parts but also gives formulas for calculations involved and some test data from the Spinning Laboratory.

THE measurement of yarn diameter may be made in a number of ways. Optical methods are in use whereby the diameter is measured by observing the yarn through a microscope or by projecting its shadow on photographic paper on phototubes and obtaining a trace. Mechanical methods such as those employing precision micrometers are in use, as is the old method of winding a piece of yarn about a small spool or rod of known diameter.

The last method is the basis for the instrument described in this paper. This instrument features a beam whose angle of elevation can be adjusted, a coil compressor that will handle both coarse and fine yarns and an electrical counter. The required calculations for determining yarn diameter and number are easily made and only a small number of tests are required for most yarns.

Description

In 1940, Cahill[1] described a home-made device using a coil compressor sliding on a long rod on which yarn was wound in a single layer. The instrument described here is a refinement of Cahill's device for measuring yarn diameter.

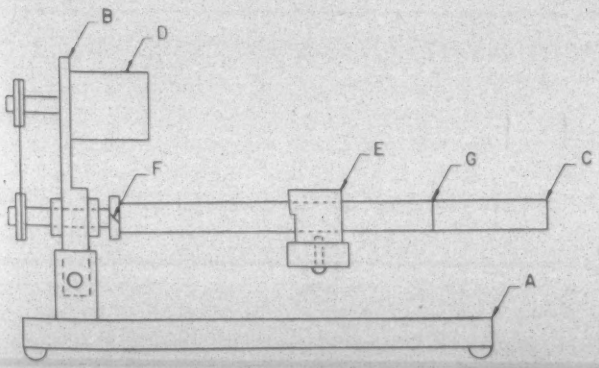


Fig. 1—A simplified drawing showing the side view of the yarn diameter instrument.

A simplified drawing showing a side view of the instrument is shown in Fig. 1. In this drawing, A is the base, B is the adjustable elevation support for the beam and motor, C is the beam, D is the driving motor, and E is the coil compressor. Fig. 2 is a photograph showing these components. In this figure, H is the pointer and I is the degree scale used for setting the beam at the desired angle of elevation. The micro-switch J is used to trip the electric counter K which counts the revolutions of the beam. The switch is actuated by a small cam on the beam shaft.

The coil compressor, Fig. 3, and E in Figs. 1 and 2, serves two purposes. First, it guides the yarn onto the beam and, second, it compresses the layers so that there is no opening between the successive coils as each is put on the beam. The coil compressor was machined from a nylon rod and is 1.41 inches in diameter and 1.94 inches long. A brass weight fastened to the bottom keeps it from rotating with the beam. A yarn guide, L in Fig. 3, is also attached. The total weight of the coil compressor is 98.5 grams.

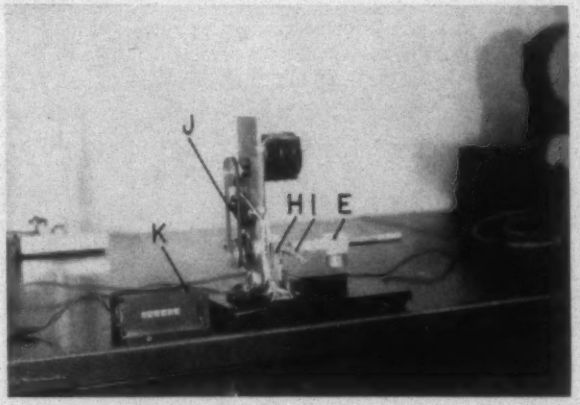


Fig. 2—A photograph showing the yarn diameter instrument.

This coil compressor is slightly different from the one described by Cahill. The Cahill model has a slot on top that served as a yarn guide and a pin that pressed on a rod to prevent the compressor from turning. Experiments with this type showed that coarse yarns would run satisfactorily but fine yarns would slip between the compressor and the beam at a point below the beam and cause the instruments to jam.

The redesigned compressor brings the yarn around the beam from the bottom instead of over the top causing it to make contact with the sloping surface of the compressor above the beam. Since the compressor and beam are in contact at this point the yarn cannot slip under the compressor.

Operation

The determination of yarn diameter with the instrument described here is rapid and the calculations are simple. To

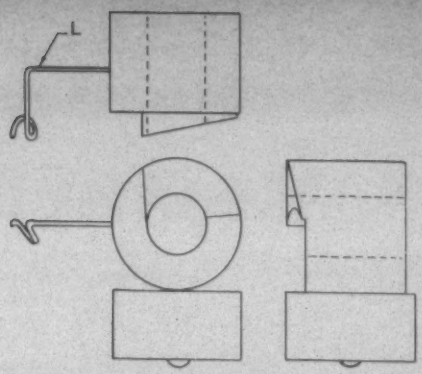


Fig. 3—A three view drawing showing the coil compressor and yarn guide for the instrument.

measure the diameter of a given yarn the electrical counter is zeroed and the yarn is passed through the yarn guide and secured in the slot F (Fig. 1). The compressor is moved to the extreme left until it touches the shoulder on the beam. The driving motor is then turned on and allowed to run until the yarn wound on the beam reaches the mark G (Fig. 1). The yarn diameter may then be calculated:

$$\text{Yarn Diameter} = \frac{S}{N} \qquad (1)$$

In this formula S is the distance in inches from the shoulder to the mark and N is the number of turns read from the counter. For the instrument described here, S equals 3.97 inches and the beam diameter is 0.50 inches.

The yarn number, in count, for the test samples may be calculated:

$$\text{Yarn count} = 0.0235 \frac{N}{W} \qquad (2)$$

N is the number of revolutions of the beam and W is the weight in grams of the yarn on the beam.

The yarn number in tex may be calculated:

$$\text{Yarn number (tex)} = 25{,}128 \frac{W}{N} \qquad (3)$$

The Results

A number of tests were made to determine the best angle of elevation for the beam and to measure the variation between determinations for various yarn numbers. In Fig. 4, yarn number versus yarn diameter has been plotted for beam elevation angles of one, two, four, six and eight degrees. The yarns for this test were all spun with a 4.00 twist multiplier.

It can be seen from Fig. 4 that as the angle of elevation for the beam is increased the apparent yarn diameter decreases because the coils on the beam are pressed together harder with higher angles. For subsequent testing at the spinning laboratory an elevation angle of one degree was chosen. At this angle the pressure of the coil compressor is at a minimum but is still large enough to push the coils together and leave no vacant space between them. Higher angles tend to cause the smaller yarn numbers to overlap.

Table 1 shows a summary of the variation data collected on four carded yarn numbers. The yarns were processed through two drawings, a super draft[2] roving frame and were double creeled in spinning. The average coefficient of

viation for the four samples was 1.48 per cent. This is a low value and shows the effect of averaging a large number of turns on the beam. In practice, five samples of yarn are tested to determine the average yarn diameter.

Table 1.—Yarn number, diameter and coefficient of variation of diameter for the four yarns.

Yarn No.	*Tex Count*	*Diameter in inches*	*% C.V.*
10.2	57.9	0.00505	1.4
33.6	17.6	0.00980	1.9
46.9	12.6	0.0118	1.5
60.3	9.79	0.0134	1.1

Summary

The yarn diameter instrument described here can be used for determining the diameter of both coarse and fine yarns. The method is rapid and only a few tests are necessary to give a reasonable estimate of the diameter of most yarns. The yarn number of the sample being tested can be easily found by weighing the yarn from the beam and using equations given as one and two.

The angle of elevation at which the beam is set influences the apparent yarn diameter. An angle of one degree has been chosen for use at the spinning laboratory but other angles may prove more satisfactory as different yarn properties are studied.

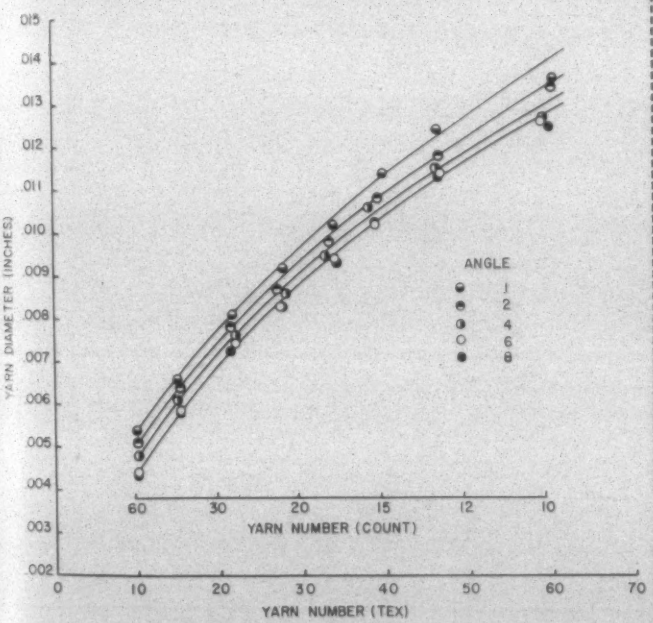


Fig. 4—A graph showing yarn diameter as a function of yarn number for five beam elevation angles.

Acknowledgements—The author wishes to acknowledge the helpful comments of Mr. P. R. Ewald and Dr. K. L. Hertel; and to express his gratitude to the spinning laboratory staff, to Miss Catherine Waggoner for tests and calculations and to Mr. Herbert Hutchens for making up the experimental yarns.

References

[1]Cahill, J. F., *Textile World*, 1940.

[2]The mention of trade products does not imply their endorsements by the Department of Agriculture over similar products not mentioned.

The Importance Of

Standardization of Mill Machinery

In this article the writer, a textile engineering specialist, states the case for standardized operations in the mill. He tells how standardization can aid in efficient manufacturing and gives actual case history examples of the effects of non-standardized machinery.

By WILLIAM S. SPROULE

MANUFACTURING plants processing fibers into yarn or fabric are confronted with the task of producing the most perfect product possible and at the lowest possible cost. This job becomes even more difficult because in cotton mother nature has provided a raw material with numerous variations. Unless carefully controlled, these variations in raw material properties plus the ones added during the manufacturing operation lead to the production of an end product of poor quality and at an increased cost per unit.

Variations introduced during manufacturing are sometimes extremely high. For this reason a few of them are presented here, with actual illustrations. These illustrations may appear to be small, at first, but on close observation and with the realization that they may occur at every process, one can readily visualize the total effect. The effect may be seen in either or both lower production or lower quality. Either case would result in increased cost of labor and overhead. The illustrations should show the importance of having a plant or plants standardized on a practical engineered basis.

Most manufacturers are quite cautious in the purchasing of raw cotton. They usually make sure to get the proper grade, staple, etc., and establish blends to meet customer specifications or price. On the other hand, how much consideration is given to a program of machinery replacement to see what bearing it will have on actual processing? Other than to increase production resulting in lower mill operating cost only, that is. With care and planning in proposed machinery changes, style changes, or any changes affecting operational processing, variations can be minimized.

Standardizing

A few of the ways which standardizing affects quality are variation in: (1) long term uniformity; (2) short term uniformity; (3) twist; (4) product weight; (5) amount of additives; (6) tensions; and (7) operator practices. With respect to cost, the lack of standardization of equipment increases: (1) direct and indirect labor cost; (2) overhead; (3) raw material cost; (4) machine hours to produce the same number of units of production; (5) cost and difficulty in establishing job assignments; (6) cost and difficulty in maintaining job assignments; and (7) machine interference.

Some of the effects of machine variation can be seen by an examination of the operation of the flat top card. This examination will begin with uncontrolled drafting zones or tension drafts. These drafts vary from 1.00 to 1.08 depending on the gear drive or type of lap roll. Lap rolls may be made of smooth wood, metal, rough surfaced materials or grooved wood. These rolls are changed from one kind to another many times without making any adjustments in draft so long as they appear to work satisfactorily. These drafts are simply tension drafts and should draft just enough to keep the lap free from wrinkles. They are especially important in changing over to heavier weight laps.

Calender Roll Drafts

Drafts between the girt calender roll and the coiler calender roll often vary anywhere from 1.01 to 1.10 de-

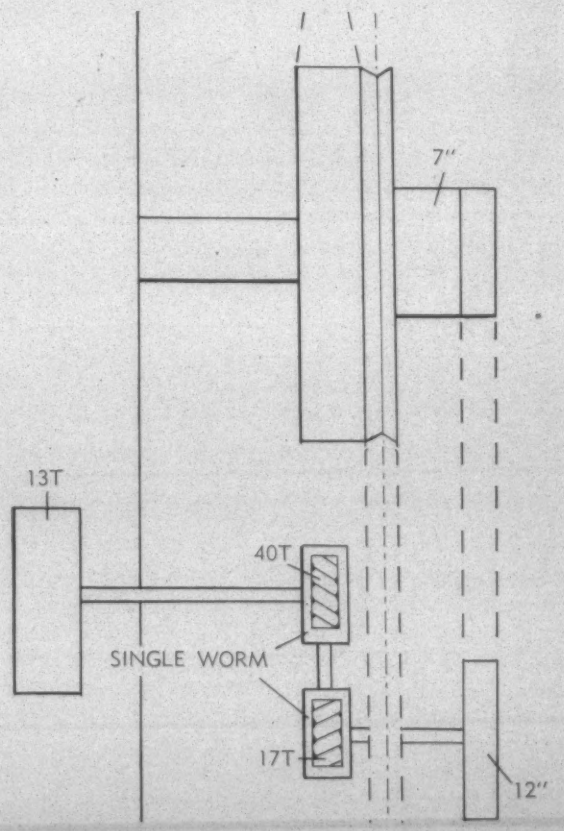
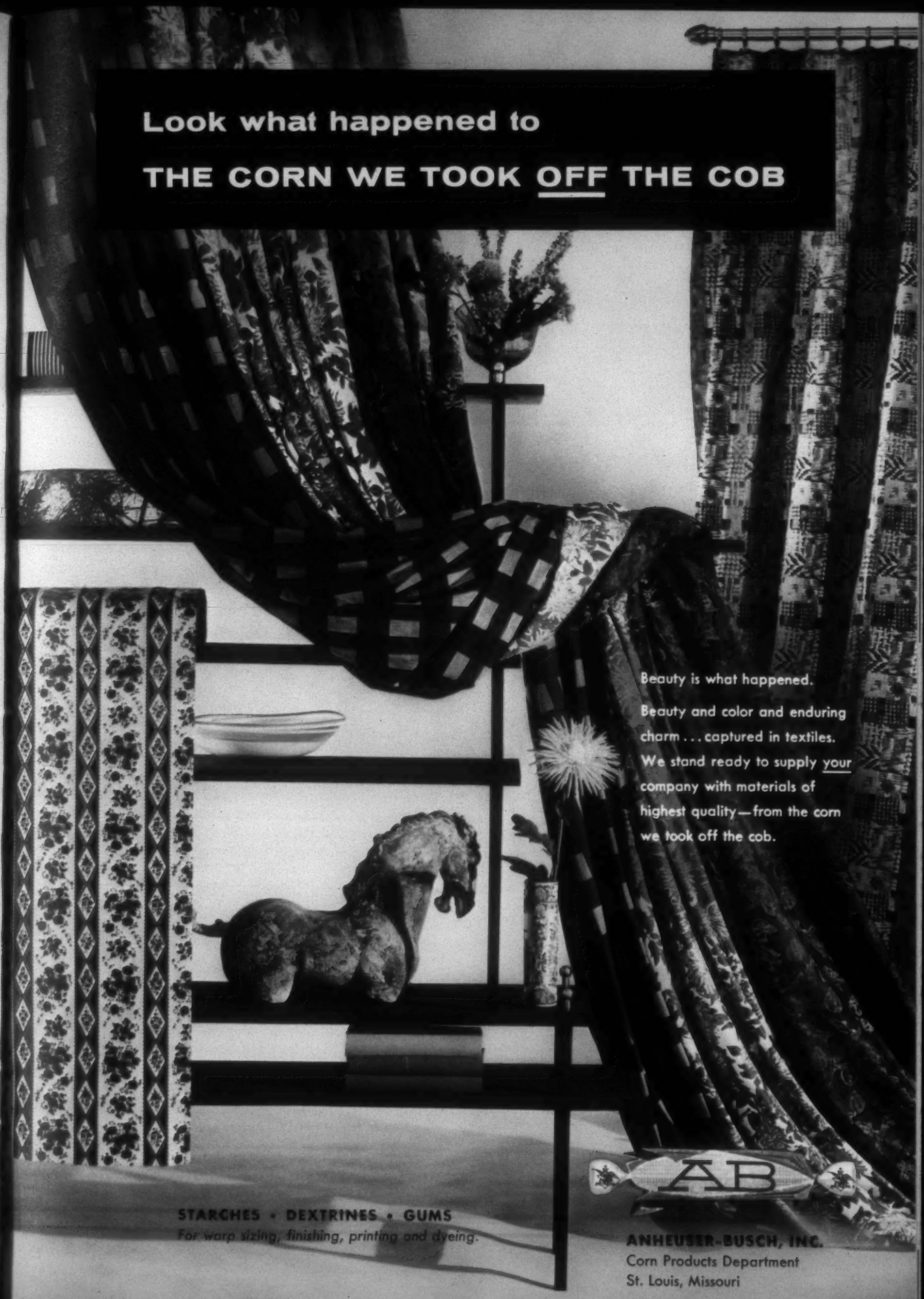


Fig. 1—Gearing diagram shows the drive from the cylinder journal to the flat drive gear on card A.


Look what happened to
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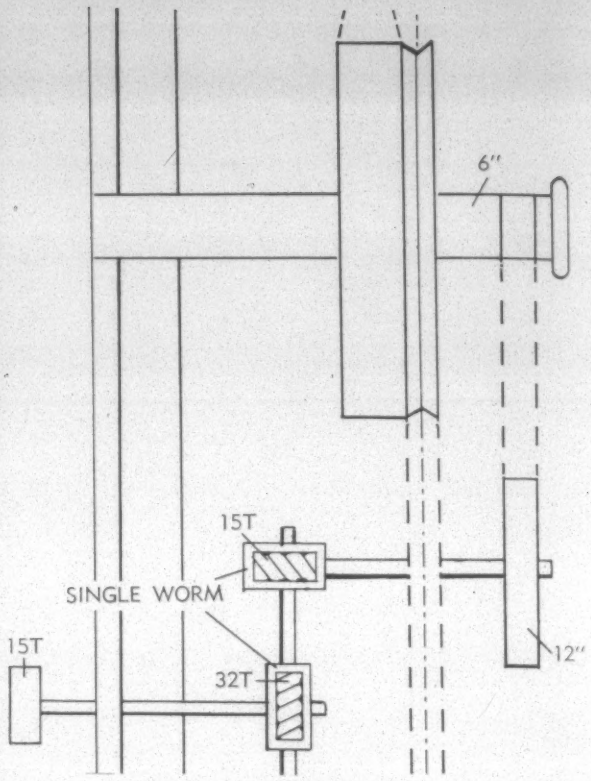


Fig. 2—Gearing diagram for card B.

pending upon the height of the comb, tension or setting of the coiler calender rolls and the size and type of trumpet. This draft should be held to a minimum. The sliver should not sag but it must be prevented from stretching in this uncontrolled drafting zone. Excess draft in this zone usually increases the sliver weight variation.

Even though flat speeds are one of the most neglected speeds in the mill they have a definite relationship to quality and waste made at the card. In the calculations which follow, the flat speed relationship between two cards can readily be seen. With other conditions being equal a one per cent sliver weight variation could be expected from the difference in flat speed in the cards shown here. Other things, such as pounds produced, can content and possibly doffing cycles, will also be affected.

Card A:

Cylinder r.p.m. = 160

$$160 \times \frac{7.25''}{12.25''} \times \frac{1}{17} \times \frac{1}{40} \times 13 = 1.81 \text{ flats per minute.}$$

Card B:

Cylinder r.p.m. = 160

$$160 \times \frac{6.25''}{12.25''} \times \frac{1}{15} \times \frac{1}{32} \times 15 = 2.55 \text{ flats per minute.}$$

With this difference in the number of flats per minute and assuming a standard weight per strip of 15 grains, the variation in per cent strips between the two cards is seen.

	Card A	Card B
lbs./card/hr. fed 100%	10.00	10.00
flats/minute	1.81	2.55
grains/strip	15	15
per cent strips	2.3	3.3

Card B produces one per cent more flat strips than Card A. This introduces a one per cent variation in sliver weight. It also affects the quality of the stock to a degree.

Constants

Additional variations can also be injected by having different production and draft constants on cards. The following calculations and tables show that variations in production, sliver weight, speed, can content and possibly doffing cycles can be caused by constant differences.

	Card A	Card B
Draft Constant	1,600	1,520
Draft Gear	13	13
Sliver Weight	54	56.5
Mechanical Draft	123	117
Std. % Waste	6.0	6.0
Actual Draft	129	123

Assume that the mill is aware of the two different draft constants but rather than standardizing them has changed the draft gear to help make a delivered weight compensation.

	Card A	Card B
Draft Constant	1,600	1,520
Draft Gear	13	12
Mechanical Draft	123	126
Std. % Waste	6	6
Actual Draft	129	132.5
Sliver Weight	54	52.6

The difference in weight of the finished sliver is smaller than in the previous example. However, it would have been better to standardize the draft constants on the cards and eliminate the 1.4 grain weight difference.

Production Constant

An examination of the affect of production constant differences have a similar result as the draft constant variations. Production constants are often found where more than one type of card is located in the same card room.

	Card A	Card B
Coiler Calender Roll Constant	.037	.040
Production Gear	22	20
Cylinder r.p.m.	160	160
Coiler Calender Roll r.p.m.	130.2	128.0
Pounds Factor	.001495	.001495
Sliver Weight	54	52.6
Pounds/card/hr.	10.5	10.1

Calculations:

Card A

$160 \times .037 \times 22 = 130.2$ r.p.m. calender roll.
$130.2 \times .001495 \times 54 = 10.5$ lbs./hr.

Card B

$160 \times .040 \times 20 = 128.0$ r.p.m. calender roll.
$128.0 \times .001495 \times 52.6 = 10.1$ lbs./hr.

A difference of 0.4 of a pound per hour is seen between the two cards.

Operator Practices

A standardized method of performing various operations, especially machine operations, should be established. The operators should be trained and control checks installed to insure good results. Once again the card will be used as a

typical example. A few card tender practices which warran such attention are discussed.

Laying laps—Improper practices of laying or creelin laps may result in severe damage to the card. Hard en or tail ends allowed to pass through the card usually resu in damage to the licker-in wire, mote knives and cylind clothing. Repairing or replacing these damaged parts is qui costly. It is considered a good practice to tear off the la yard of the lap to make sure that hard ends do not g through. The last yard at the card is the first yard off th picker and is usually wrinkled and off weight. This woul cause poor quality in addition to possible damage.

Piecing up—In order to obtain the best quality and ef ficiency in subsequent operations the card tender and al persons required to piece up sliver breaks should be train ed in using the best method of doing this job. This metho should be set up as a standard practice. The practice o piecing up ends should include breaks at the web betwee doffer and girt calender rolls and at sliver between girt calender rolls and coiler calender rolls. The removal o sliver from can after piecing should also be standardized.

Start up after stripping—The necessary time interval should elapse after stripping to allow the sliver to build up to standard weight. Once this time interval has been established, the method of stripping should be set and main tained. If too little time is allowed, the sliver will be light and form a long term variation in uniformity.

Summary

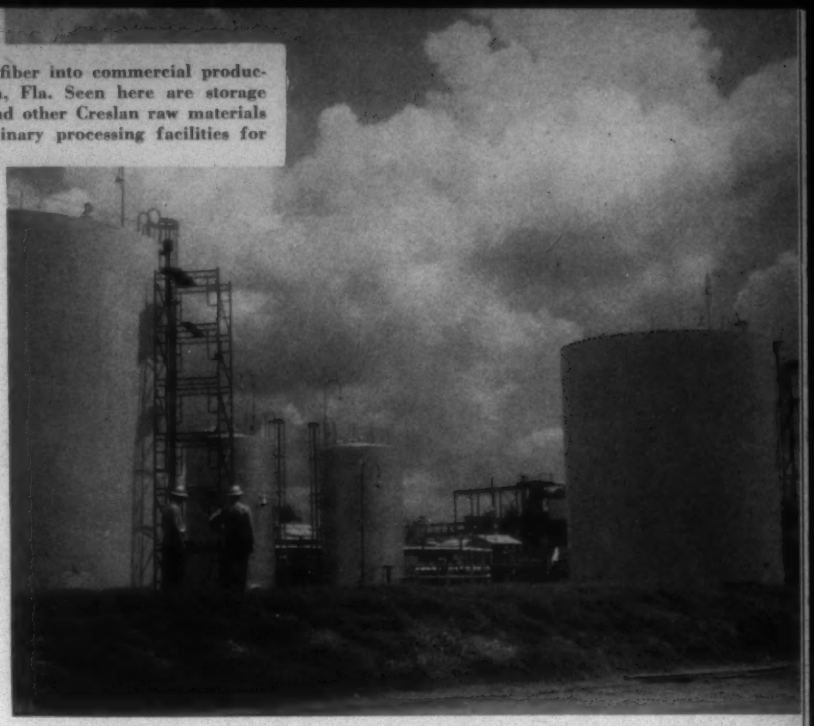
These few illustrations on carding are taken from actual case histories. One can imagine the direct bearing these variations have on each subsequent operation. In addition, variations can be injected into the product at every operation. Some of these variations will tend to off-set each other, nevertheless it is easy to see the tremendous job faced by those persons who are trying to produce a quality product from each department. Standardization has a direct bearing on quality, production and efficiency, ease of processing and cost.

Textile Failures Increase In 1958

Manuafcturers of textile mill products showed 74 failures for the first eight months of 1958. During the same period last year some 68 failures were recorded. The liabilities of the failures were also greater during the eight months this year. Manufacturers of apparel and other finished products showed a ten per cent increase in numbers of failures and a 39 per cent increase in liabilities. An upward trend was also generally noted in the January to August failure statistics for wholesalers of dry goods and apparel.

Whitin Participates In Manchester Show

The Whitin Machine Works, Whitinsville, Mass., is participating in the International Textile Machinery Exhibition being held October 15-25, 1958 in Manchester, England. For the first time on display in Europe, the company will show the recently announced Piedmont spinning frame. In addition, the latest model Super J comber will be shown featuring a new nipper assembly providing higher production on all combing ranges. Also on display will be the Whitin Even-Draft drawing frame.



American Cyanamid Co. expects to have its Creslan acrylic fiber into commercial production late this Fall at the Santa Rosa Plant near Pensacola, Fla. Seen here are storage tanks in the plant's organic tank farm where acrylonitrile and other Creslan raw materials are stored. In the background are utility areas and preliminary processing facilities for other raw materials.

Creslan's A-Coming!

American Cyanamid's New Acrylic Fiber Is On Its Way . . .

COMMERCIAL production of American Cyanamid Co.'s Creslan acrylic fiber will begin late this year at one of the world's most modern and efficient fiber production facilities—the company's $25 million Santa Rosa Plant near Pensacola, Fla.

Construction of all major installations at the plant is now virtually complete, and the installation of processing equipment is proceeding. Initial shipments of acrylonitrile and other Creslan raw materials have been received, and key members of the plant's operating staff are now on duty preparing for its start-up.

After production begins in late Fall, output at the huge plant will be gradually increased until the plant reaches its full capacity of 27 million pounds of Creslan staple and tow. Limited introductory marketing of Creslan, which is to begin this Fall, will be from the output of Cyanamid's fiber pilot plant, located at the company's research laboratories in Stamford, Conn.

The giant Santa Rosa Plant, located on the eastern shores of Escambia Bay about 20 miles from Pensacola, is on a direct line of supply from Cyanamid's source of acrylonitrile, principal raw material of Creslan, to leading textile centers. The company's Fortier Plant, near New Orleans, is the nation's largest production facility for acrylonitrile—a raw material commercially pioneered in the U. S. by Cyanamid. Begun last Summer, the Santa Rosa plant will employ about 425 persons upon completion.

The plant is described as one of the world's most versatile and efficient facilities of its type, embodying the newest concepts in fiber production. In the main manufacturing building, a fifth of a mile in length, processing equipment is laid out to permit close control of production and the greatest efficiency in effecting change-overs in denier, brightness and other fiber specifications.

Cyanamid has established headquarters for its fibers division in the newly completed office building at 111 West 40th Street, New York City, to provide better service to the textile industry. Sales, merchandising, advertising, promotion, technical service and administrative offices, as well as full-scale display facilities for Creslan, occupy the building's entire 16th floor.

Selective Marketing Policy

The company's long-range sales program for Creslan includes a unique selective marketing policy designed to protect textile manufacturers using Creslan and to broaden the fiber's application into at least 50 end-uses. Under the selective marketing policy, sales of Creslan will be concentrated in quality outlets in each end-use area. The marketing positions of these manufacturers will be strengthened by a quality and trademark control plan that will cover all end-products.

The use of the Creslan trademark will be authorized only on products which meet Cyanamid's standards. The trademark will not be authorized for use by others on intermediate products such as fibers, roving, yarns and greige goods. It is authorized only for finished fabrics and end-products when these have been approved by Cyanamid.

When their products have been approved, manufacturers will be given official Creslan hang-tags and labels, and will be permitted to advertise and promote their products as containing Creslan. But this authorization will be withdrawn if quality standards are not maintained. The Creslan marketing organization includes four key sales departments, working directly with customers in the woven goods, knitgoods, home furnishings and specialty products fields.

Conventional Processing

According to American Cyanamid, Creslan can be processed with ease on any textile system, can be used alone or in blends with other fibers, and can be adapted to use in scores of apparel and home furnishings products. To the processor, Creslan is said to offer the positive advantages of easy, less costly processing and superior dyeability,

making possible important savings in dyeing times and costs.

Creslan has affinity for the widest range of dye classes, and can be dyed in a full range of colors with superior fastness to light, washing, crocking and perspiration. In addition, because of the outstanding dyeability of Creslan, fabrics in which Creslan has been blended with other fibers can frequently be piece-dyed to achieve effects traditionally associated with stock or yarn-dyeing, American Cyanamid points out.

Other properties cited for Creslan are its wrinkle resistance, its ability to be durably creased and pleated, its dimensional stability and excellent recovery, its quick drying after washing, its resistance to moths, mildew and flaming, and its soft, warm, comfortable hand.

Applications

Creslan applications will include men's and women's suitings and coat fabrics, dress and shirting fabrics, sportswear fabrics, sweaters, jersey fabrics and other knitwear, simulated fur fabrics, hosiery and underwear, blankets, carpets, home furnishings fabrics, work clothing, industrial fabrics and special products.

Initial commercial output will be 2, 3, 5 and 15-denier staple and tow, bright and semi-dull, with staple in lengths from 1¼ to 5 inches. The expansion of the plant's capacity in months to come will permit output in all deniers and staple lengths needed to meet over-all trade requirements.

Properties

Creslan is produced by a Cyanamid-patented wet spinning process from a polymer containing a high percentage of acrylonitrile which Cyanamid, now the largest U. producer, pioneered on a commercial basis in this country. Properties of Creslan acrylic fiber are listed below:

Specific gravity:	1.18
Tenacity:	3.0-3.5 grams per denier
Elongation:	30%-35%
Sticking temperature:	433° F.
Cross-section:	Circular
Color:	0.124-0.129 Yellowness (original). Measured according to Federal Specification TT-P-141a method 425.2, which sets a value of 0.000 for a pure white body
Effect of prolonged sunlight:	Negligible
Effect of age:	Virtually none
Resistance—	
to dry cleaning solvents:	Excellent
to weak acids:	Excellent
to strong organic acids:	Good
to strong inorganic acids:	Poor
to weak alkalies:	Fair
to strong alkalies:	Poor

The nation's newest textile fiber production plant is American Cyanamid Co.'s Santa Rosa Plant near Pensacola, Fla., for the production of Creslan acryile fiber. Installations seen here include utility area *(left foreground)*, maintenance shops *(left background)*, compressor house *(right)*, and the giant pipe-rack running one-fifth of a mile through the plant area. The main manufacturing building lies behind processing equipment in the center of the photo.

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Cotton Classing Is An Art

By RALPH HOISINGTON

The purpose of this paper is to briefly trace the development of cotton descriptions to see on what factors they are based, to examine the considerations of the classer in assigning his values, to point out his difficulties and to explain some of the causes of differences of opinion. It was originally written for the edification of apprentice classers with the Anderson, Clayton Co.

LIKE snowflakes and tree leaves, no two bales of cotton are exactly alike. Each is in some way different from the other. Some bales spin well; others, poorly. Some are suited for certain mill-end constructions, others unsuited for the same purposes. Because of this, certain types of cotton are worth more money than others. Certain categories with slight ranges of value have been established. Each of these has been given a name. Strict middling is a category as is strict low middling; $\frac{7}{8}$" as $1\frac{1}{16}$". Cotton falling within a group assumes the name of the group. The duty of the cotton classer is to correctly place cotton into properly developed categories.

What has been stated here so simply is in practice an extremely difficult process for reasons to be dealt with later. Because of this difficulty, however, we cannot always agree with ourselves and our opinions differ from those of others. Because of this disagreement fortunes have been made and lost. Success or failure in the cotton business is partially attributable to the acceptance or rejection of the fact that we cannot ever have anything but frequent disagreement. The foundation of our merchandising system is based on the lack of unanimity of opinion. With complete agreement our system as we know it would no longer exist.

Class Marks

In the early days of our production history "cotton was cotton" with little thought given to variation in spinning value or spinning differences. Until comparatively recent times there were only a few value descriptions. These were couched in the broadest terms, such as *white* or *dirty*, *short* or *staple*. These descriptions were often supplemented by names associated with areas of growth, such as *benders*, *peelers*, *uplands*, etc. From times such as these to the present there has been an evolutionary tendency, because of Government rulings such as the Cotton Standards Act and because of the pressure of competition and demands of more elaborate mill machinery, to become more specific in cotton descriptions. Today, the classer is furnished with thousands of recognized class marks that he must memorize, understand and identify.

Cotton is described in a language which can be broken down into four basic groups. Each defines a portion of cotton value. These groups are grade, staple, preparation and character. Standards for the first three were established originally by representatives of the industry and Government and are now maintained by the Government. There are no established standards for character, and therefore more room exists for disagreement. Character is defined as each individual is trained to see it.

The primary factors taken into consideration by the classer in grade are color of the fiber and foreign matter. The term color includes the range of color from white to gray; the difference being caused by varying degrees of dirt and microbial damage. Chroma, also, by a degree of yellowness, is an important factor. If the chroma is diffused, usually caused by age, variety or lack of exposure to sunlight in the field, this condition is described as bloomy. If the yellowness is not uniform, it is usually indicative of damage by soil stain, insects, micro-organisms or frost. These types of deterioration are described as light spots, spots, tinges or stains, depending upon the degree of saturation and the nature of the damage. Unfortunately for the classer, the yellow and gray in cotton do not neatly separate themselves but always combine in varying proportions, thereby complicating his problem of assessing value.

Gradations in color are established by Government standards. These gradations are not regular in degree and are extremely small. Miss Dorothy Nickerson, a foremost color authority in this country, has stated that she knows of no other color profession where one finds the fine color distinctions as are made by the cotton classer. She further states that the human eye can distinguish approximately three million shades and tints of color, and that this ability is stretched to the very utmost by the narrow gradations that are a part of the cotton color differentiation.

The amount and type of trash matter is an important component of grade. Some of the recognized types of this foreign matter are leaf, motes (immature seeds), seed coat fragments, shale, bark, grass, dust and sticks. Others are chewed-up cloth, horse hairs, sisel, oil and kerosene damage. There are others that it will not be necessary to go into here. Not only do the different characteristics of these types of foreign matter require different value assessments because of their varying degrees of undesirability, but the task is made more difficult by the varying proportions in which each are found.

Let us take a look at one of the factors—leaf—to illustrate the point. Leaf, in volume, may represent two per cent in high grades to 20 per cent in low grades. The size of the leaf requires separate standards of evaluation. The weight being a constant factor, the small pin leaf is penalized much more severely than the large leaf, because it is more difficult to remove by the mill machinery.

Leaf distribution is also very important because cotton is classed on the low side. Under our present classing system, bales are penalized out of proportion to weight of the trash when leaf is not present in a uniform manner. The

color of the leaf is important also. When leaf is green as contrasted against the customary brown or black, it frequently happens that the manufacturing processes squeeze some of the chlorophyll present onto the manufactured item. After processing a brown stain results which is troublesome to remove and thereby lowers the quality of the product.

Length And Performance

Staple is a length and a performance measurement described in thirty-seconds of an inch. Staple standards are issued by the Government and represent length only. The classer must average the length of the million plus fibers that are present in his pull against the average length set up by these standards. This task would be relatively simple were it not for the fact that length must also be a mill performance indication. This makes it necessary to penalize the length sometimes as much as $\frac{5}{32}$ of an inch when the fibers are immature. The same sort of penalization is required when fiber friction is less than should be expected or uniformity is lower than average. Stapling cotton is an art demanding the highest refinement of human senses and requiring the skill and judgment that only comes with a combination of natural ability and experience.

Preparation is concerned with the degree of alignment of the fibers and whether or not they have been cut by the gin saws. Neps and naps also come under the heading of preparation.

Character is a term used in a supplementary manner to describe the fiber properties and conditions of both grade and staple. In grade, character includes the effects of excess heat used in the ginning process, fineness of fiber, type of spot damage, preparation, wax content, etc. Staple character includes fiber uniformity, fineness and friction or drag. Character, although reviewed separately here, is in many instances automatically considered by the classer as he gives his opinion on grade and staple.

There are many other influences outside the cotton that affect the cotton man's judgment. Feeling that it is equally as important to understand what the classer cannot do as what he can do and believing that many of the reasons for his accuracy limitations are not completely understood, we will consider more fully some of the causes of the classer's disagreements with himself and with others.

These reasons resolve themselves into two distinct groups —external and internal. The external causes contributing to classer difficulty are environment and variable nature of cotton. The most important environmental factors to be borne in mind are temperature, humidity and light quality. Low temperatures will cause the fingers to become numb, therefore lessening their sensitivity. Also, the natural oil is present in the skin in smaller amounts when the weather is cold. This oil is important because it permits the fibers to become more straightened than would otherwise be possible without it, thereby facilitating length measurement.

Compensate For Light

Light is important because it is reflected from the face of sample. With blue light, cotton appears blue; with red light, it appears red. Depending upon the quality of the light, gray cotton appears white; and white, gray. The classer must know the effects of each type light and learn to compensate for them.

Humidity is important because the cotton fiber is diffi-

cult to manage without proper moisture content. It is very difficult to make it do what you wish when it is dry. In the old days, spinning areas sprang up where the natural humidity was high. Lancashire, England, is an example. The same reasons that make proper humidity conditions an important part of mill operation also make it an essential to cotton classing. In addition to actually shrinking about one per cent in length when completely dry, the cotton fiber appears to be even shorter because the natural crimp or kink, a unique characteristic of cotton, becomes more pronounced. The principle is somewhat similar to the fact that we are taller standing up than when we are sitting down.

The resilience of cotton makes it impossible for the classer to completely staighten out the fibers at a low moisture content. Conversely, when water is present in relatively high amounts the fibers are easily staightened and the length that is the result when combined with the additional friction that moisture provides makes the cotton appear longer to the classer than it actually is. So, the classer must compensate as he does with the lights, when he accustoms himself to calling dark, light and light, dark; and learn to call short, long and long, short, according to his estimation of the amount and effect of the moisture present in the cotton he is classing. In a modern classing room many of the difficulties mentioned have been partially eliminated by artificial lights and temperature and humidity control.

In addition to these environmental causes of classer variation, the classer varies because the cotton itself varies. Based upon the most exacting length measurements known to textile science, estimates have been made that every classer's sample has a length variation of at least $\frac{1}{32}$-inch. Consider the significance of this in attempting to reach classer agreement in terms of thirty-seconds of an inch! Not only does cotton vary in length but in each sample every single characteristic varies that is a class consideration, whether it be leaf, color, fineness, maturity, strength or what have you. The classer in measuring some fiber properties—staple, for example—not only must average the variable length of the millions of fibers but must also average the variation in average.

Cavitoma

The average also changes on the same drawn sample. Research conducted by the laboratories of Kendall Mills has proved that micro-organisms, or *Cavitoma*, can cause staple length to change as much as $\frac{1}{8}$-inch in as short a period as six months. Color of the sample can also change significantly after only a few months storage.

Psychology plays a prominent role in cotton classing. Those unfamiliar with the importance of mental attitudes in this matter can understand the part it plays by remembering days we all have experienced when our outlook has been such that the world looked bleak, other days when an improved mental attitude resulted in a world that was bright and cheery. The same world in both cases only the outlook was different. So it is with the classer. Dissimilar mental conditions result in different impressions of the same cotton.

It might be wondered, in the light of what has been said here, how is it possible that classers ever agree and how can we do business at all? It could be asked that if this thing were so difficult, why is it that we ship tens of thousands of bales of cotton on description, in many cases without rejections? This can be done because it is easier for classers to agree on the average value of number of bales than it is to agree on the class of a single bale. It is possible classers agree in principle and disagree on the details.

Agree Not To Disagree

It is possible also for a far more important reason. A is not chaos in the industry because, throughout it, reasonable cotton men have agreed to try not to disagree. By this I mean sensible cotton men avoid the hypercritical and realizing their own and others' limitations, consciously or unconsciously strive to understand the other person's viewpoint. The exceptions are cases where their ideas are too far different to even attempt it. The fact that a mill cotton classer may take a 100-bale shipment intact does not necessarily mean at all that he feels every bale to be identically equal to contract specifications. He may consider the average with its small percentage of ups and downs and decide that it's about as good as a fellow classer can do, considering the problems that beset him.

It is fitting to mention that in spite of the things covered here—the disadvantages, the limitations, the imperfections, the difficulties— the plain fact remains that the classer performs a service that can be done by no other means. The cotton laboratory cannot touch him for his all-round performance. In my position, being associated with both the cotton laboratory and the classing end of the business, it should be possible for me to look at the situation more unbiasedly than can some others. Yet today it is doubtful to me who can predict more accurately the spinning performance of cotton—the laboratory or the classer.

The laboratory and the classer complement one another, supplying strength for each other's weaknesses. Like gin and vermouth which make the Martini, the classer-laboratory combination results in a performance which is superior to that of each of the parts. The art of cotton classing requires the classer to have a knowledge far greater than has been suggested here. Much of this is acquired unconsciously through experience and used subconsciously in practice.

Classer Requirements

The classer needs a love of the job, for this quality is a prerequisite for doing anything well. An understanding of psychology is helpful for its benefit in counteracting the tricks of others and making his own attempts successful. Introspectiveness is an important quality in that it enables the classer to perceive more easily his own limitations. A gift of pictorial imagery makes it less difficult to retain differences that exist in the standards. Imagination will help him understand what cotton will be like under different circumstances. Adaptability is necessary in order to combat the constantly changing situations that are a part of the profession. Self-confidence is an important quality. He needs it not in the sense that he must feel he is always right but in the sense that he feels experience has shown that the chances are pretty much in his favor that he is more right than the next fellow. Keen judgment is necessary so that he may evaluate correctly each of the component factors that must be taken into consideration to arrive at proper classification. And last, for reasons that can be best understood only through experience, it will help to have a strong back.

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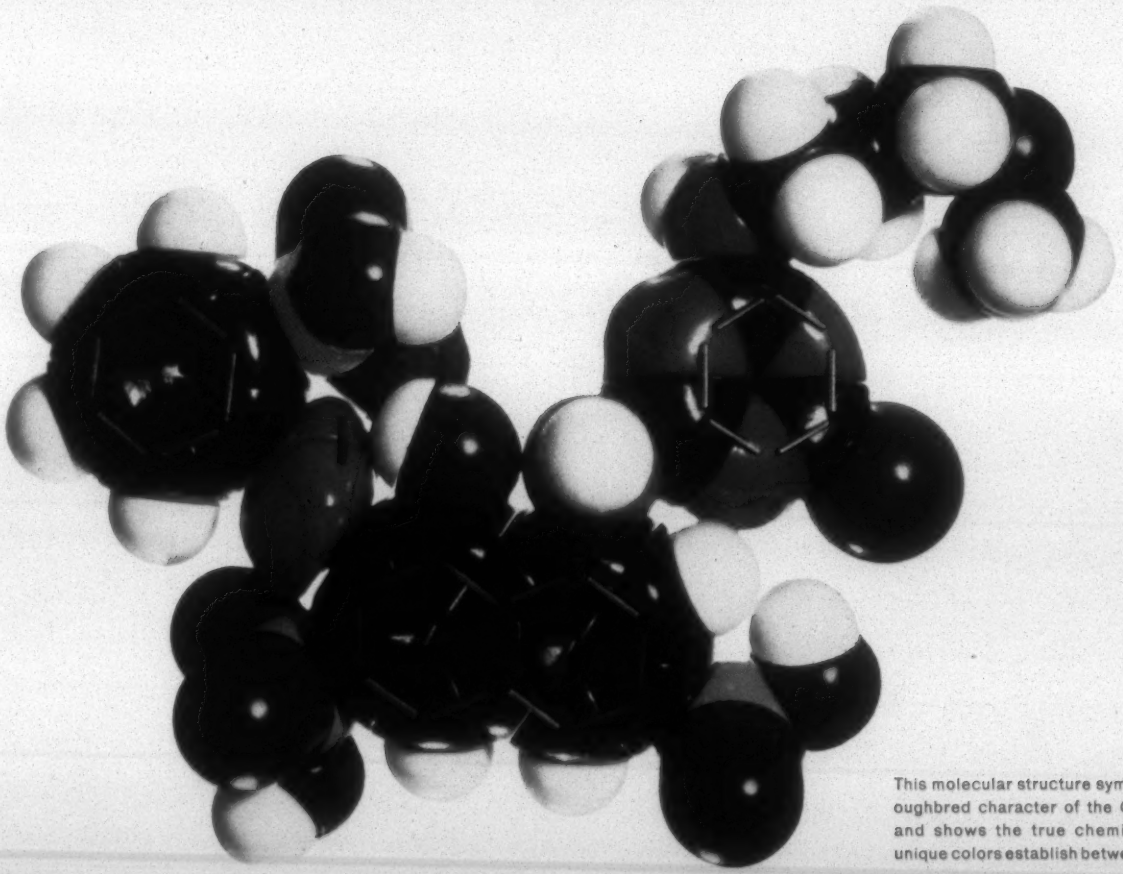

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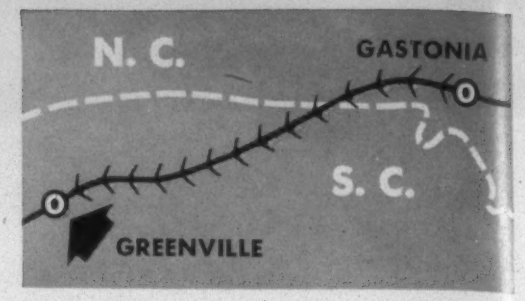

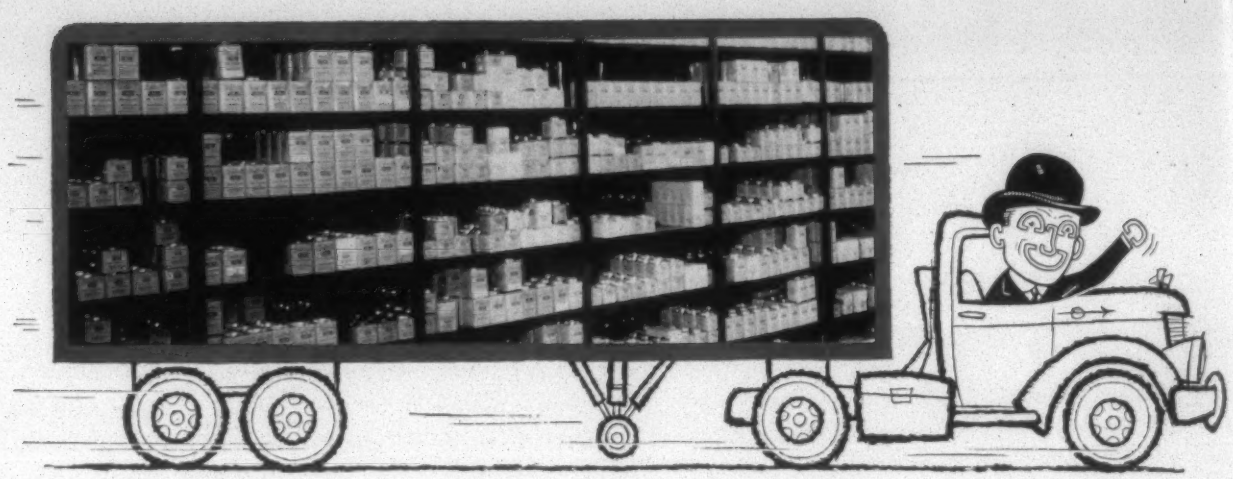

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An Investigation Of

Power Requirements For Cotton Carding

This article is a report on the findings of a study concerned with the consumption of power by the various components of the cotton carding machine when running idle and when processing cotton. Through the utilization of a sensitive recording watt meter, determinations were made of power requirements for starting and operating the card under various conditions of lickerin speed and production rate. The influence of bearing friction and lubrication on power is reported along with the observations of the thermal expansion of the cylinder.

By A. L. MILLER and R. S. BROWN

Southern Regional Research Laboratory[1]

IN the three years of investigations of the cotton carding machine which resulted in the development of the SRRL card without flats (2, 3), it was found essential to obtain a comprehensive understanding of what goes on in the card power-wise in order to have a complete picture of the card's processing characteristics. A study has been made, therefore, to determine how much power is used and where and how it varies within the normal range of operating conditions. The investigation proved instructive and should be of interest in textile manufacturing where an enlightened view of a machine can mean a better product at reduced cost.

A carding machine is a combination of mechanisms which have practically no output in the form of power or force transmission but perform work within the machine. Because of the huge proportion of machine mass to material processed per unit of time, the useful work performed by the machine consumes but a small percentage of power input to the machine. The remaining power is required to overcome internal losses and to drive the various mechanical components.

The internal losses in the card can be attributed in general to two things—friction and air resistance. Power is consumed by friction at all bearings and rubbing surfaces. Air consumes power by offering resistance to the moving parts of the card in three ways: surface friction, particularly at the surface of the main cylinder (1); drag at such parts as the spokes of the cylinder; and pressure resistance where air pressures are increased by action of the rotating parts (2).

The useful work of the carding machine is accomplished at six points where the cotton is processed: (1) at the lickerin, where tufts are separated from the lap and partially opened; (2) between the cylinder and flats where the tufts are further separated and opened, and fibers partially individualized; (3) at the point of doffing where the fibers are further individualized; (4) at the comb where the web is removed from the doffer cylinder; (5) at the calender rolls where the sliver is formed; and (6) at the coiler where the sliver is compressed and packaged.

There are other minor points where useful work is done, such as at the screens, mote knives, feed roll and at the lap roll which revolves the cotton lap for feeding the machine.

Procedure And Results

All tests were conducted in the Southern Regional Laboratory experimental textile mill under controlled atmospheric conditions and were repeated three times. The results have not been verified at the mill level. The power measurements were made on a 1948 model 40-inch card equipped with an American Pulley[2] individual drive and with no accessories such as fancy roll or continuous stripper. A variable speed drive was used for the lickerin during the starting measurements and a second for the doffer during the running measurements. The power consumed by each speed drive was found to increase power readings by approximately 20 watts and is included in all measurements.

Power measurements were made with the aid of an Easterline-Angus[2] recording type watthour meter. Measurements were first made on a standard card with revolving flats and then the flat assembly was replaced with the SRRL flatless card apparatus (3). This was found necessary in order to achieve reliable figures from a single card. The flats have many points of friction which are difficult to keep

[1]One of the laboratories of the Southern Utilization Research and Development Division, Agricultural Research Service, U. S. Department of Agriculture.

[2]It is not the policy of the department to recommend the products of one company over those of any others engaged in the same business.

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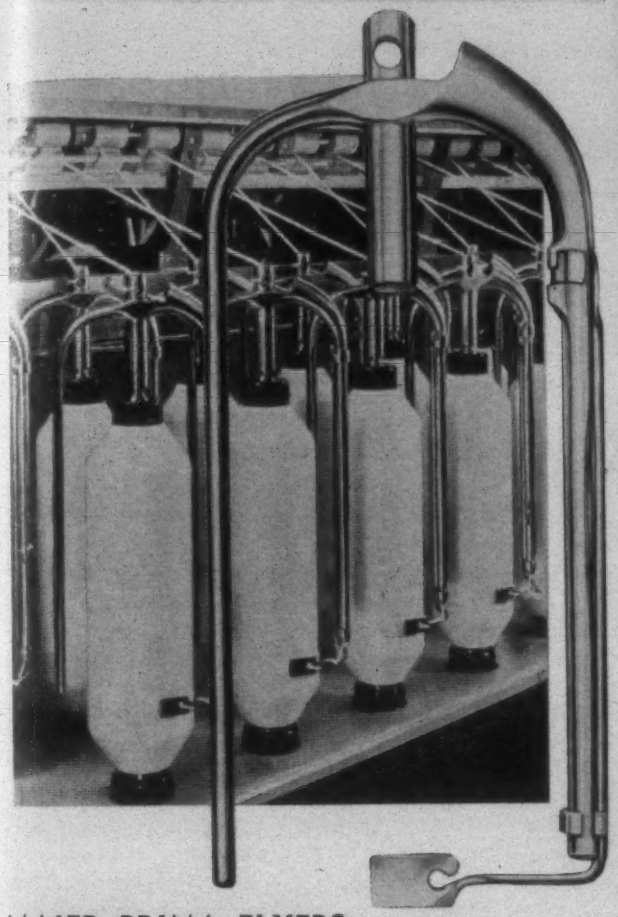

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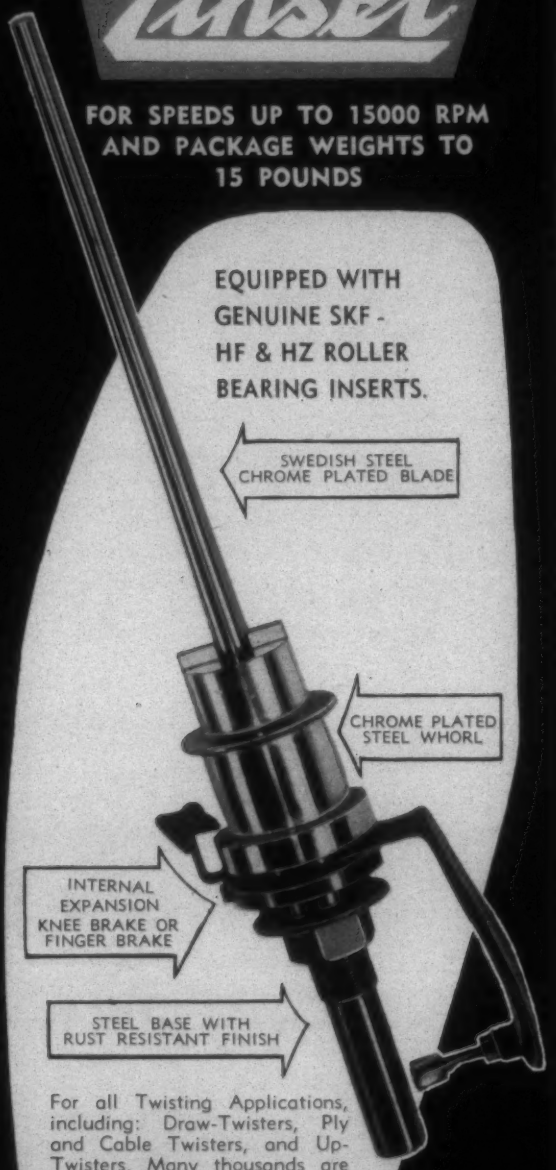

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constant, such as the friction of the flats on the flexible bends and over the tops of the brackets, and the end thrust of the worm gears. The SRRL apparatus has no moving parts and requires no power to operate. The revolving flats averaged 100 watts power consumption.

The distribution of power consumed in a card is somewhat unexpected. Fig. 1 is a reproduction of a condenser chart from the recording watthour meter running at three inches per minute, showing the change in power consumption as the various units of the card are put into operation. This chart indicates that the power distribution in the card is:

main cylinder	210	watts
lickerin at 450 r.p.m.	125	"
revolving flats	100	"
doffer cylinder and coiler	7	"
doffer comb, 1550 cycles/min.	60	"
feed at 10 lbs. per hour	100	"
total	602	watts

Variations

Variations occur in the power consumption of some units during normal operations due to the periodic method of lubrication. The bearings of the main cylinder on the card, for instance, caused variations as much as 20 per cent of the total power consumed. These bearings are of the sleeve type with a grease box on top which is packed with grease and in addition is oiled each eight hours of running. The grease is intended only as a reserve lubricant in case the oil is dissipated prematurely. A power chart at six inches per hour showing the beginning and end of an eight hour cycle for operating the SRRL card is shown in Fig. 2. It can be seen that as the end of the cycle nears, the bearing friction varies widely until the oil is applied. In order to minimize this variation while measuring power at the card, a special lubricant was used in the cylinder bearings, and the period of time determined for which each application of the lubricant would keep the bearing friction constant. Measurements were made during these periods of constant friction.

The card main cylinder does not lend itself well to lubrication, as the lubricant must be used sparingly because of the possibility of damaging the textile product. Such circumstances are usually conducive to the use of antifriction bearings. Roller bearings are now being used on some cards at the lickerin, however there are a few cards equipped with antifriction bearings on the main cylinder. Investigations indicate that roller bearings on the main cylinder would reduce power consumption between 50 and 100 watts per card.

Thermal Expansion

Tapered roller bearings would have the advantage of practically eliminating clearance and end play, providing adjustment for wear and cooler operation. This last statement may seem incidental, however the present study showed that heating of the shaft and spokes by bearing friction causes some expanding and distortion of the cylinder. In place of the flats, an experimental mechanical device was installed and adjusted to about .004 inches clearance from

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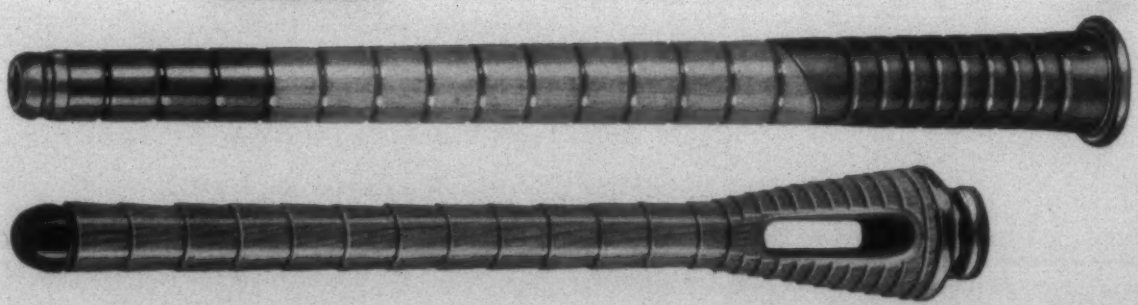

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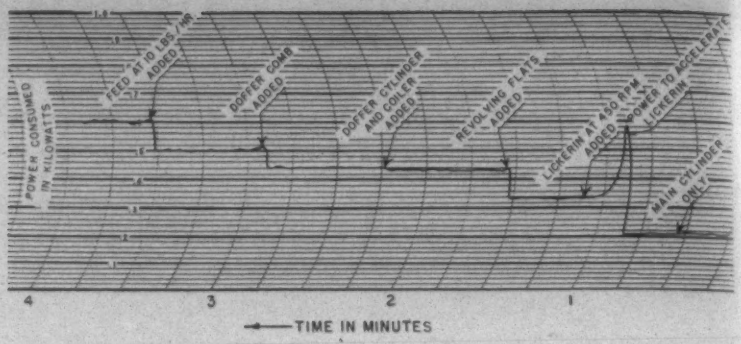

Fig. 1—Power required to operate the main components of a carding machine.

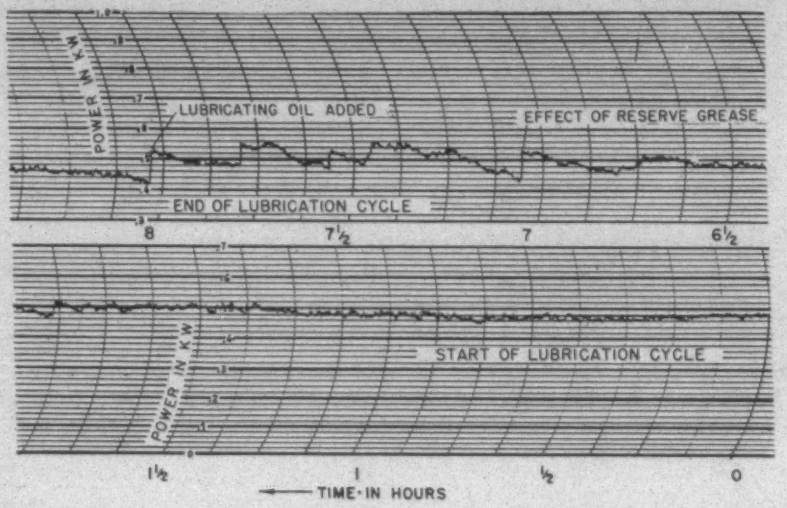

Fig. 2—Effect of friction of main cylinder bearings on power consumption at the card during a normal lubricating cycle.

the main cylinder of a card that had been idle overnight at a temperature of about 75 degrees F. After the card had run a few hours, the cylinder began to rub the mechanism at one point. The card was stopped and the clearance was found to be zero to .001 inches. After the card was allowed to return to room temperature, the clearance was again .004 inches.

Indications were that the change was caused by the thermal expansion of the cylinder, plus the tendency for the cylinder to rise as it revolves due to the well-known action of a film of lubricant being drawn under the journal (4). The bearing temperature was 75 degrees F. at the start and 140 degrees F. at the time the cylinder contacted the mechanism, a rise of 65 degrees. Assuming that the shaft and spokes of a 12-inch radius had increased an average of 40 degrees, then the radial expansion would have been $.00000556 \times 40 \times 12 = .0027$ inches. It appears that a decrease in flat settings of about .003 inches can occur when a cold card attains operating temperature.

All of the following data were taken on a card without revolving flats as previously stated. The data, therefore, should have 100 watts added where it is desired to think in terms of the power consumption of a standard card. It is best to consider separately the starting of the card, since in starting a completely different set of conditions is encountered. It is a well known fact that heavy machinery always offers a great resistance to starting after lying idle a short time. If proper lubricating procedures are not followed, the bearing and journal surfaces may abrade each other before the lubricating action, due to running, begins to take effect. This metal to metal contact in bearings, with lack of lubrication, constitutes what is known as static friction.

The static coefficient of friction is very much higher than that of surfaces which are lubricated. In starting the card, friction will consume a greater than normal amount of power. Since a card is normally started without processing cotton, there will be no power consumed by useful work. The air resistance will be zero at the time of first starting and will increase until the operating speed is reached.

There is another factor which consumes power during starting, and that is the force necessary to overcome the inertia of the parts that are being accelerated. Because of the mass of the card, particularly the cylinder, this force is significant. The two main forces consuming power during starting of the card are friction and inertia.

Power Consumption

The power consumed by the card during starting is about five times its normal operating consumption, so that starting up a card room after a complete shut down can overtax the electrical system of a mill. Fig. 3 shows the difference in power required to start a card with and without flats. In order to investigate the starting power required for different rates of acceleration, the clutch on the card drive was modified so that the card could be brought up to running speed in 35 seconds or in 60 seconds.

Fig. 4 shows the power distribution for the first minute of starting a card at the two rates. It can readily be seen that although the initial power surge is the same in both cases, apparently to overcome the static friction, it rapidly

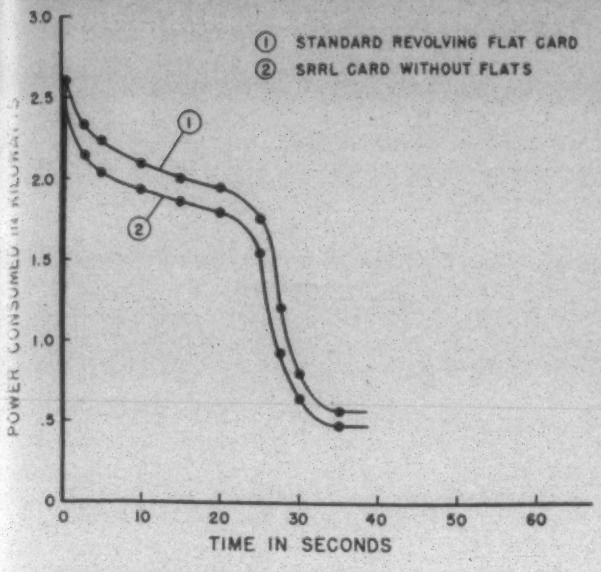

Fig. 3—Power required to start a standard card and a card without flats with the doffer disengaged.

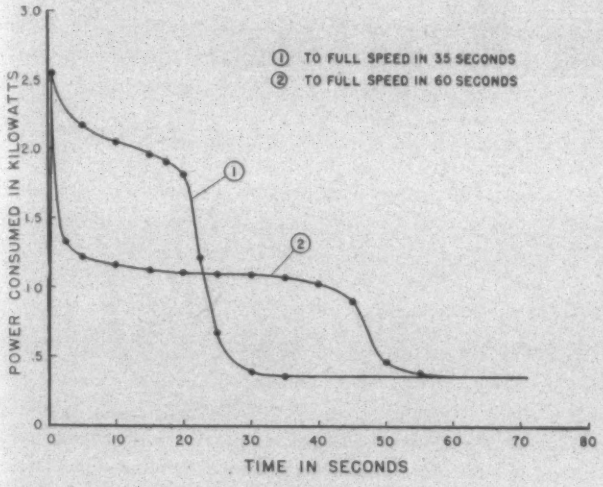

Fig. 4—Power for starting a card at two rates of acceleration with the feed disengaged.

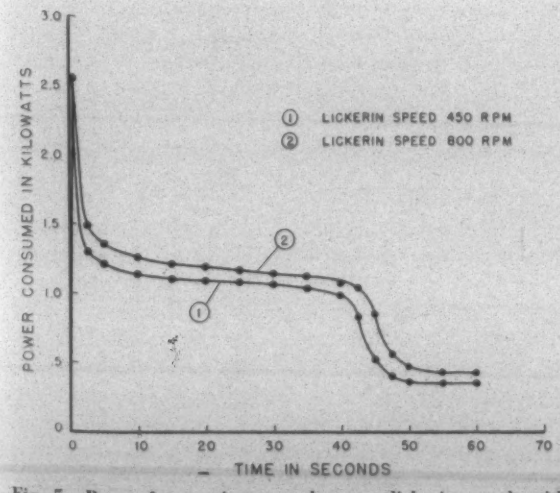

Fig. 5—Power for starting a card at two lickerin speeds with the doffer disengaged.

sideration might be given to extending the starting period of the card in cases where power facilities are momentarily overtaxed during starting.

The total power consumed in kilowatt-hours in bringing the card up to full speed should be considered. Integrating the area under curve one from zero to 35 seconds totals 0.014 kw.-hr. The area under curve two from zero to 60 seconds totals 0.016 kw.-hr. Comparing the areas under both curves from zero to 60 seconds, shows .017 kw.-hr. for one and 0.16 kw.-hr. for two, or actually no significant difference in work to reach operating speed.

As indicated in Fig. 5, a lickerin speed of 800 r.p.m. uses about 100 watts more than a speed of 450 r.p.m. This additional power required is consistent throughout the acceleration and operation ranges.

The data show that a motor driving this particular carding machine must be capable of delivering an average power of about 2 kilowatts for 22 seconds or 1.1 kilowatts for decreases to a lower figure where the rate of acceleration is less. Since starting is mostly a matter of overcoming the force of inertia, the power required will be proportional to the rate of acceleration. These data indicate that con- 46 seconds for bringing the machine up to speed from rest, indicating a requirement for a $1\frac{1}{2}$ to two horsepower motor. This same card, when in production, requires between 0,45 and 0.72 kilowatts, as will be shown later, which indicates that one horsepower would be sufficient. There is some question as to whether or not the higher horsepower motor needed for starting a card is operating at its best efficiency during the long periods of mill operation at lower horsepower. Motors normally have good electrical efficiency over a wide range of load, however, it is a point worth considering in a card room.

Power Fluctuation

Once the carding machine is in operation there is little fluctuation in the power requirements, except for friction. As stated previously, friction is dependent on lubrication to a great extent and will vary insofar as the lubrication varies. There is no significant increase in power requirements as a result of normal loading of the flats and cylinder. However, should the cylinder be allowed to overload, the power consumption increases rapidly.

In the normal operation of a card there are two things which are frequently varied that have a considerable effect on power consumption. One is the production rate, which necessitates changes in the speeds of the feed roll, doffer

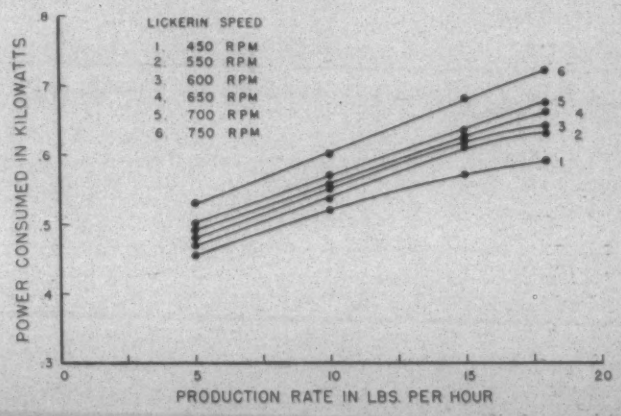

Fig. 6—Power required to operate a card at different production rates and lickerin speeds.

cylinder and coiler; and the other is the lickerin speed. Measurements have been made of total power consumed by the card at six lickerin speeds and at four production rates. The results are plotted in Fig. 6. The card used for obtaining this data has roller bearings for the lickerin. The increase in power consumption with lickerin speed probably is due in part to the additional work being done on the fibers. The data indicate that power consumption increases at a rapid rate after 700 r.p.m.

Summary

No attempt will be made to indicate dollar savings that can be realized through power reduction at the card. However, if operating personnel are made just a little more conscious of the factors that tend to consume power, a saving is almost sure to follow. The major factors for reducing power consumption can be summed up as:

(1) Reduce friction by maintaining a proper lubricating schedule with the proper lubricants, in accordance with the manufacturer's recommendation.

(2) Avoid unnecessary friction by maintaining proper clearances to prevent rubbing of moving parts.

(3) Avoid unnecessary bearing friction by repairing scared journals and worn bearings, and by periodically cleaning bearings. Also by maintaining proper alignment of bearings, particularly the adjustable ones, such as on the shaft that drives the feed roll and on the doffer comb.

(4) Use roller bearings or ball bearings wherever possible in lieu of sleeve type bearings.

(5) Use a longer starting period if necessary to reduce initial electrical overload.

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Cavitomic Cotton

What is it? How does it affect the mill? What can be done about it?

By GUS GUGGENHEIM, Associate Editor

Having been known for almost a decade, the effects of cavitomic cotton are being recognized more and more as the cause of certain cotton mill troubles. This article, which is intended to be informative only and not the basis for future experimental work, describes some of the factors causing cavitomic cotton and explains its effects on the stock as it is run in the mill. The writer is greatly indebted to Drs. L. T. Hall and J. P. Elting, The Kendall Co., for their valuable assistance in preparation of the article.

THE terms "cavitoma" and "cavitomic cotton" were coined by Drs. L. T. Hall and J. P. Elting of The Kendall Co. Research Laboratories, Paw Creek, N. C., as names to particularize the deterioration during storage of certain microbiologically damaged cottons. The results of this microbiological action are: (1) increased fiber breakage during processing; (2) increase in waste during processing; (3) a decrease in spinnability; and (4) a lowering of yarn evenness and strength. Also significant increases in comber noil are observed.

It is believed that cavitomic cotton results from microbiological action on the fibers during the critical period between the opening of the boll and the drying out of the fibers. Thus, high humidity, abundant rainfall, or excessive leafiness of the plants are conducive to the production of greater amounts of cavitomic cotton.

Symptoms Of Cavitoma

In truth, cavitomic cotton is difficult to definitely identify. Hall and Elting found that there are several symptoms which are always present in cavitomic cottons. One of these symptoms is high alkalinity, or pH, of the cotton for several months after ginning. Another symptom is a low content of easily soluble reducible material, or sugar content. Other symptoms are high alkali centrifuge value and the observation with the aid of a microscope of many fibers damaged by fungus growth.

With so many symptoms, it is obvious that no one of the tests can be considered conclusive in positively identifying cavitomic bales. To make the job of identification even more difficult, the alkalinity in the cotton fibers of many, but not all, bales drops off to about neutral after several months of storage.

Mill Conditions

The mill knows when it hits a lot of cavitomic cotton. When high percentages of affected cotton get into the opening room, the results in spinning are sometimes strikingly evident. Blow-ups can be traced directly to this damaged cotton. An Alabama mill's cotton department and laboratory permitted the use of 1,000 somewhat sub-standard bales of special purchase cotton based on their normal fiber tests of Micronaire, Pressley and grade and staple. The cotton was put into process and things began to happen. Spinning ends-down increased and yarn breaking strength

creased to a point that the blend had to be taken out the opening room. Additional testing of the fiber indicated the symptoms of cavitoma. The only way the cotton could be run was in doses of not more than 20 per cent of the total mix.

Dr. Elting told TEXTILE BULLETIN that the effects of cavitoma interested his company because the performance of the cotton in the mill after storage is similar to that of a shorter staple cotton. He and Dr. Hall found that cotton originally classed as $1\frac{1}{16}$ inch at harvest time was behaving as if it were $1\frac{1}{32}$ inch or even one inch in the mills some months later. An associated effect is the increase in the number of fibers shorter than $\frac{1}{2}$ inch after the bales have been stored for a time.

It is obvious what happens when cottons equivalent to one inch staple are put into processes which have roll settings and speeds for $1\frac{1}{2}$ inch. It is just possible that poor running conditions sometimes found in the spinning room are not due to "dawg-days," or the wind coming out of the Southwest, or poor spinning room supervision. As indicated below, it can on occasion be due to cavitomic cotton.

Microbiological Action

The fungi attack the cotton when it is still in the field. These fungi do not do significant damage by the time the cotton is harvested, ginned and classed. The cotton may

TABLE 1—COMPILATION OF ASSORTED FACTS CONCERNING ALABAMA 1957 COTTON

ALABAMA	*Early*	*Middle*	*Late*
Huntsville			
Staple	$1\frac{1}{32}$" SM	1" LM	1" LM
Sugar	0.2	0.0	0.0
pH	6.8	8.9	9.4
B.F.	2533	2033	1936
Thomasville			
Staple	$1\frac{1}{32}$" M	$1\frac{1}{32}$" M	1" LMLtSp
Sugar	0.1	0.2	0.0
pH	6.9	6.8	8.5
B.F.	2439	2417	1903
Troy			
Staple	$1\frac{1}{32}$" SM	$1\frac{1}{32}$" SM	$\frac{31}{32}$" LMLtSp
Sugar	0.2	0.2	0.0
pH	7.3	6.8	8.3
B.F.	2276	2370	1690
Wetumpka			
Staple	$1\frac{1}{32}$" M	$1\frac{1}{32}$" M	1" LM
Sugar	0.3	0.2	0.0
pH	6.7	6.8	9.5
B.F.	2406	2569	2113
Florence			
Staple	$1\frac{1}{8}$" M	$1\frac{1}{32}$" LM	$1\frac{1}{32}$" SLMLtSp
Sugar	0.2	0.0	0.0
pH	6.6	8.8	8.8
B.F.	2475	2102	2066
Sulligent			
Staple	1" SM	1" LM	1" LM
Sugar	0.2	0.0	0.0
pH	6.6	9.3	9.0
B.F.	2428	2171	1997
Huntsville			
Staple	1" SM	1" LM	1" LM
Sugar	0.3	0.0	0.0
pH	6.8	8.6	8.7
B.F.	2497	1961	2019
Centre			
Staple	$1\frac{1}{32}$" SM	1" LM	1" LM
Sugar	0.3	0.0	0.0
pH	6.7	9.0	9.0
B.F.	2392	1903	1820
Montgomery			
Staple	$1\frac{1}{32}$" M	$1\frac{1}{32}$" M	$\frac{31}{32}$" LM
Sugar	0.2	0.2	0.2
pH	7.1	6.9	8.5
B.F.	2428	2439	2044
Alabama Averages			
For Staple of:	$1\frac{1}{32}$"	$1\frac{1}{32}$"	1"
Sugar	0.22	0.16	0.00
pH	6.91	7.22	9.01
B.F.	2412	2379	1965

TABLE 2—COMPILATION OF ASSORTED FACTS CONCERNING GEORGIA 1957 COTTON

GEORGIA	*Early*	*Middle*	*Late*
Baxley			
Staple	1 1/16" M	1 1/16" SLM	1 1/16" SLMLtSp
Sugar	0.2	0.0	0.0
pH	7.3	8.6	8.4
B.F.	2370	2185	1972
Cartersville			
Staple	1 1/16" SM	1 1/32" M	1" M
Sugar	0.2	0.0	0.0
pH	6.7	8.8	9.4
B.F.	2580	2323	1867
Jonesboro			
Staple	1 1/32" M	31/32" SLMLtSp	15/16" LMLtSp
Sugar	0.2	0.0	0.1
pH	8.8	9.0	8.7
B.F.	2345	1773	1469
Madison			
Staple	1 1/16" M	1 1/16" MLtSp	1" LMLtSp
Sugar	0.2	0.2	0.1
pH	6.7	7.9	8.8
B.F.	2511	2301	1820
Sandersville			
Staple	1 1/16" M	1 3/32" SLM+	1 1/32" LM+
Sugar	0.2	0.2	0.0
pH	7.1	7.0	9.0
B.F.	2532	2475	2207
Atlanta			
Staple	1 1/32" M+	1" M	31/32" SLMLtSp
Sugar	0.3	0.3	0.0
pH	6.7	8.7	8.7
B.F.	2428	2052	1643
Georgia Averages			
For Staple Of:	1 1/16"	1 1/16"	1"
Sugar	0.2	0.1	0.05
pH	6.95	8.25	9.10
B.F.	2498	2243	1844

have a good staple, be of middling grade and good color. In fact, cavitoma was found by Drs. Hall and Elting when working with one to 1 1/16-inch middling grades of cotton, which were of good color. The foot-hold gained by the fungi is extremely subtle in the beginning.

When the cotton is put into the warehouse, the substances formed by the fungi are still in the cotton and working very hard embrittling the individual fibers. This can continue until the fibers are so seriously damaged that they break when put into processing. This explains the lowered fiber length which was found by the Kendall researchers.

The mill may be running along very well until such a mix is put into the opening room. As soon as the affected stock works its way through carding into spinning, the mill's efficiency blows up. Ends-down increase, break factors drop, weaving efficiency and fabric quality can suffer. When the affected mix has run its course and good cotton takes its place, running conditions improve. The amount of impact felt by the mill from the affected cotton is in proportion to the percentage of the blend which is cavitomic.

Test Results

A look at a list of facts from the U. S. Department of Agriculture's fiber and processing test results on some varieties of cotton grown by cotton improvement groups in 1957 gives dramatic evidence of the effects of two of cavitoma's symptoms on yarn skein strength. The compilation of facts in Table 1 represent results found in testing cotton from Alabama growth areas. Table 2 contains results from Georgia areas. These two states are considered indications of conditions existing in all Eastern cottons.

The first area in Table 1 is Huntsville. Remember, two of cavitoma's symptoms are high alkalinity, or pH, and low sugar content. Early staple is listed as 1 1/32-inch strict middling; middling staple is one-inch low middling; and late staple is one-inch low middling. Early sugar content is 0.2; middle sugar is 0.0; and late sugar is 0.0. Early pH is 6.8 which is not high. Middle pH is 8.9 which is on the high side. Late pH is 9.4 which is quite high. A pattern is established in these results in that starting early the sugar was high and pH was low and as the season progressed sugar content decreased and pH increased.

The final line of the listing for the Huntsville area is labeled B.F. or break factor. The effect of the low sugar-high pH pattern is seen in the break factor. Early break was 2,533; middle break was 2,033; and late break was 1,936. It is normal to expect a cotton with 1 1/32-inch staple to have a better breaking strength than one-inch cotton. However, in this case the difference is almost 600 units of break factor!

Trend Seen

The trend seen in the Huntsville results are evident in all areas in Alabama and Georgia listed. The Alabama averages indicate that early season $1\frac{1}{32}$-inch cotton with high sugar content and low pH have a breaking strength of 2,412 while late season one-inch cotton with 0.0 sugar and high pH have a breaking strength of 1,965. The difference between the two is 447 break factor units. Now it is true that many cotton characteristics affect breaking strength. However, looking at the tables it will be noted that in practically every single test low sugar and high pH was associated with yarns which had a markedly lower breaking strength.

What To Do About It?

The textile industry can't just say, "This 100,000 bales has low sugar and high pH so we will throw it away and get some more." With certain precautions cavitomic cotton can be run through the mill without seriously affecting running conditions or yarn quality. These precautions include: (1) learning to recognize the affected bales; and (2) blending affected bales in low percentages with good bales. Drs. Elting and Hall report that they suspect that affected bales which represent not over 15 per cent of a mix will not give serious difficulty. The Alabama mill mentioned previously said that affected cotton was run as about 20 per cent of the mix without serious trouble. The amount which can be blended satisfactorily depends on the extent of fiber damage. The longer cavitomic cotton has been in storage, the greater the fiber damage will be.

Cavitomic cotton need not hurt any mill which is progressive enough to spend the effort to get fixed for it. It must be clearly understood that all cavitomic cotton has a low sugar content and high alkalinity but not all low sugar-high alkaline cotton is cavitomic.

For further information on this subject see:

(1) Elting, "Cavitomic Cotton," *Science*, Vol. 113, No. 2933, 1951.

(2) Hall and Elting, "Cavitomic Cotton," *Textile Research Journal*, Vol. XXI, No. 8, 1951.

(3) Wakeham, Stickley and Spicer, "Cavitomic Cotton," *Textile Research Journal*, Vol. XXIV, No. 12, 1954.

(4) Heyn, "Bacterial Studies of Cotton," *Textile Research Journal*, Vol. XXVII, No. 8, 1957.

(5) Hall, "Cavitomic Cotton," Delta Council Advisory Research Committee, Ninth Spinner-Breeder Conference, September 1952, Page 16.

Spinner-Breeder Conference Date Set

The 13th Cotton Spinner-Breeder Conference sponsored by the Delta Council Advisory Research Committee will be held in the Lubbock Hotel October 21-22, Lubbock, Texas. Host for the meeting is the Plains Cotton Growers Inc. Reservations should be made direct with the Lubbock Hotel, Caprock Hotel or The Plainsman, all of Lubbock.

The Plains Cotton Growers are planning entertainment for those attending the conference and a series of tours of cotton breeding, harvesting, ginning and pilot plant developments in the plains area. The program for the meeting will feature a series of addresses and panel discussions on topics of particular interest to cotton breeders, producers and spinners. The theme of the conference will be "Modern Quality Evaluations and Their Relation to Cotton Spinning."

Some Tips On Setting, Timing & Maintaining Picking Motions

The picking motion of a loom can give a lot of trouble if it isn't set and timed properly. If your loom efficiency is low and supply costs are high, it may pay to check the methods outlined in this article on how to set, time and maintain picking motions.

By CARL WEST

AT first glance the picking motion of a loom seems to be a very crude mechanism. A closer study will show it to be a carefully designed and efficient unit that throws the shuttle from one end of the lay to the other about three times a second. The shuttle must be moved from the box smoothly and accurately so that it will fly straight into the opposite box. It must also be moved suddenly and swiftly because the shed through which it passes is open for only a fraction of a second.

The pick ball, pick shaft and power arm are all components of a first-class lever. The ball receives power from the pick cam, the pick shaft is the fulcrum and the pick arm, linked to the picker stick, is the resistance.

Setting And Timing

The pick cam is designed to start the pick ball moving smoothly and with accelerating speed. It should then break with a powerful thrust. Correct setting and timing of all parts is of the greatest importance. The timing of the pick cam will vary slightly for different models and sizes of looms. Gages or instruction sheets for each particular lot of looms should be obtained from the loom manufacturer.

There are two reliable methods of timing the pick cam. One way is to use a gage or steel rule and measure from the back box plate to the inside of the front horn of the loom side.

The other method is accomplished by pushing the lay back from front center and then measuring the appropriate distance from the reed to the fell of the cloth.

When either method of timing is used, the pick ball should rest in the hollow of the pick cam toe. The exact location of the ball in relation to the toe can be found with a pick timing gage.

The cam must be attached to the cam shaft in proper relation to the pick ball. With the ball resting on the high point of the toe, the ball should have a $\frac{1}{8}$-inch overhang if the cam is the solid type. If the loom has a rim-type pick cam, the toe should project beyond the end of the ball $\frac{1}{16}$-inch. For under-cone picking motions, the toe should be centered lengthwise on the pick ball.

Variations Magnified

These settings should be adhered to closely since the pick ball is the power arm of a lever and any slight variation in distance from point of impact to fulcrum will be greatly magnified. Some loomfixers move the pick cam closer to the loom side to give more power to the pick. This setting will give a quicker, harder stroke but little is gained in increased power. The standard setting should always be used because it produces a smooth, evenly powered stroke.

Some loomfixers also grind the cam toe to give it a longer and sometimes steeper slope. The surface of the toe should never be altered and when it becomes worn it should be discarded. It is poor economy to try and reshape a worn pick toe.

With the pick ball on the high point of the pick cam toe, raise or lower the pick shaft bearings and align the pick ball lengthwise with the surface of the toe. A common cause of an uneven or harsh pick is for the ball to contact

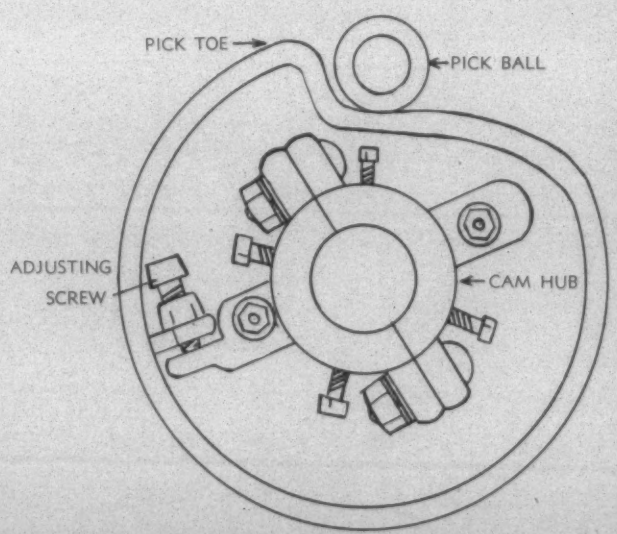


Fig. 1—This cam hub is of the split type and should be attached to the shaft carefully so that the hub and cam are correctly aligned in relation to the pick ball.

only one side of the toe. Partial contact not only affects the power of the pick but also causes undue wear to the pick ball and to the surface of the cam and toe.

With the pick ball at its highest point, adjust the pick-shaft stop until it is hand-tight against the bumper. Tighten the check nut with a wrench. It is important to keep good pick-stop bumpers and fiber shields in place. If the bumper becomes worn or the stop has too much clearance the pick ball will bounce after it leaves the toe. A worn place will appear in the pick cam rim and a false pick or extra movement will be imparted to the picker stick.

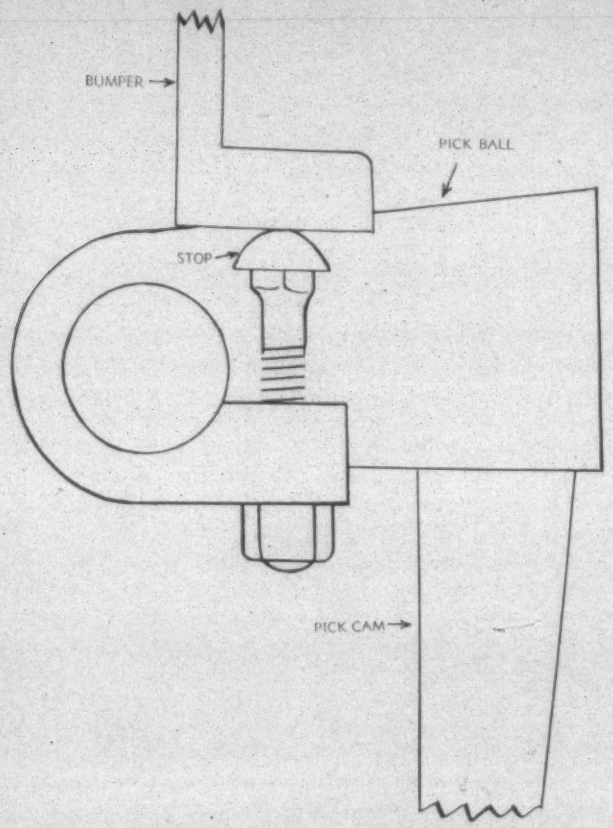


Fig. 2—The pick ball overhangs the toe of the pick cam on some looms but projects beyond the end of the ball on others.

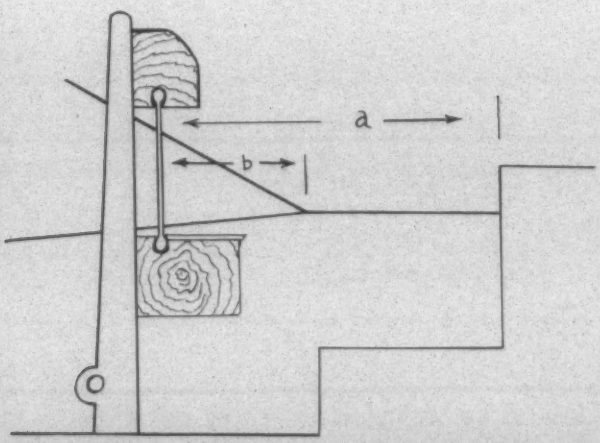


Fig. 3—The pick cam can be timed by either of the two methods shown here. Timing method of back box plate to front horn of loomside is shown at position *a* and timing the reed to the fell of the cloth is at *b*.

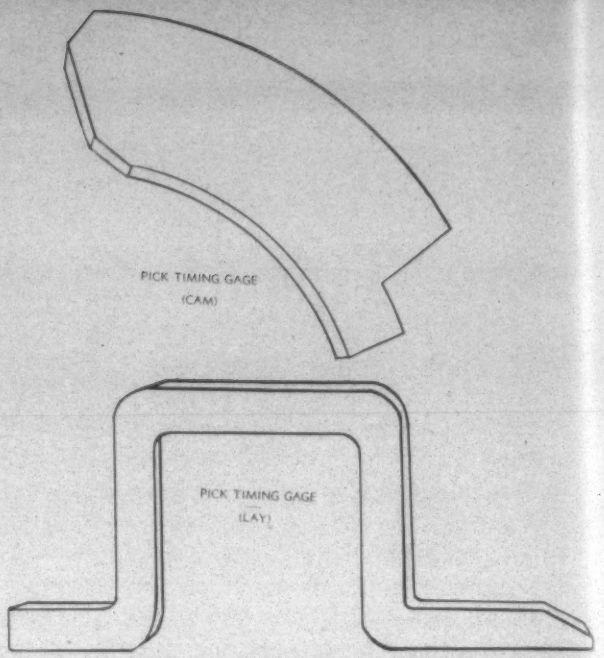


Fig. 4—Timing gages are made for individual lots of looms. The cam gage is used to position the pick toe in relation to the pick ball. The lay gage is used to time the pick cam.

Check At Warp-Out

If the picking motion is set and timed correctly and then checked at every warp-out, the loom will operate better and with less breakage of parts and fewer repairs. A small fault in the picking motion can cause serious malfunctions in other parts of the loom. It will be found that one of the most common faults of the picking motion is that of the hub slipping on the cam shaft. This slippage will cause a late pick.

If the slippage is slight the cam can be moved on the hub by loosening the nuts on the two bolts that hold the cam to the hub and running the adjusting screw against the stop. When it is necessary to move the hub, the adjusting screw should be run all the way out so there will be maximum adjustment available without again moving the hub.

The cam hub should not be moved on the shaft unless necessary. The set screws that hold the hub cut into the shaft and the hub will often slip back to its former position after it is moved. When the cam hub is moved, all the set screws should be removed and examined. If they do not have good threads and a sharp point they should be discarded.

When the set screws are tightened, turn the loom and tighten each one alternately a little more at each revolution. At the last tightening, back the screw a quarter turn and then pull tight to set the point into the shaft.

If it is neglected, the picking motion can cause low production, high seconds, increased costs and extra work. With minimum care and correct settings, the picking motion can be among the least of the loomfixers' worries.

The first steam powered textile mill in the South was built in Guilford County, North Carolina, in 1830 and was known as the Mount Hecla Mill. It was later moved to Gaston County.

Fundamentals Of Leno Designing

PART THREE

By E. B. BERRY
School of Textiles
North Carolina State College
Raleigh, N. C.

The third and concluding installment of this series describes in detail the construction of one of the most difficult leno weaves, the Boston Leno or Spanish Marquisette. Also discussed are the clip spot leno weave, the two-cross-two weave, mock leno, and no doup leno, among many other details of leno weaving.

THE plain doup needle has its limitations. For every change in the pattern another set of doups with their respective slackener, back and jumper harness are required. It doesn't take many changes of patterns to exhaust the jack capacity of a 20-harness dobby. In order to cut down on the number of harnesses and still make a fancy pattern, the super doup needle is used.

The slot in the leg of the super doup needle is made to accommodate the doup ends. Since the same standards are used as with the plain doup needle the only change necessary is to replace the regular doup needle with a super doup needle. When the super doup needle is installed, the slot must always face the front of the loom. Fig. 28 shows the loom drawing for a one-cross-one leno using super doup needles. This is the open shed with the second standard raised. Under these conditions the doup end is allowed to be raised but the super doup needle will not raise the doup end. Instead, the pattern harness (the back harness of the regular doup needles) will raise the doup end when it is up. If the pattern harness is left down, the doup end will remain down as is shown in Fig. 29. Each change of pattern may require only one extra harness which is called the pattern harness. With the second standard up, the shed formed may be either open or plain depending upon whether the pattern harness is raised or lowered.

On the crossed shed, with the first standard up, all the doup ends must go up. Since the slot faces the front it will be bound off by the first standard.

Fig. 30 shows a weave that uses one set of super doups. Right and left-hand doups are used in combination. Pick one is the open shed with the second standard up. The doup ends may be raised or lowered depending on the patterns harness. On pick two the first standard is up forming the crossed shed.

Doups Raised

Here all the doup ends must be raised, with no choice of ups or downs as in the open shed. Compare picks two, four, six and eight. All are the crossed shed and all the doup ends must slackener at one time. Thus only one slackener is needed. The drawing-in draft is a point draw. This is easier than a staggered or skip draw. On picks one, three, five and seven the doup ends are either up or down but always on the open shed side. In this weave, a regular plain weave selvage can be used, as the first and second standards weave plain.

A four-end leno, two-cross-two, is illustrated in Fig. 31. Picks three, four and five are crossed sheds and the doup ends must be raised. Picks six and seven are the open shed. If the weave repeated like this, super doup needles would not be needed. Note picks one and two. Here the doup and ground ends interlace in plain weave order and this requires

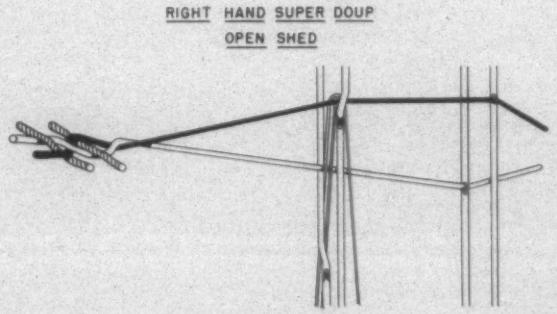


Fig. 28—This is an illustration of a loom drawing for a one-cross-one leno using super doup needles. This is an open shed with the second standard raised.

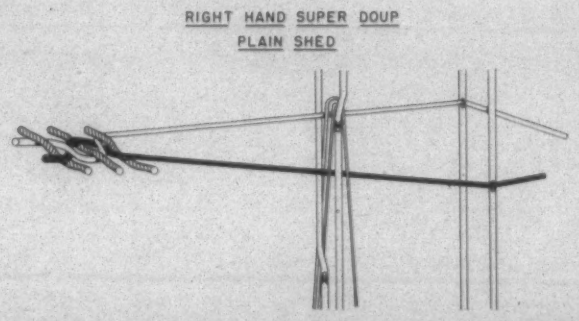


Fig. 29—This drawing shows a plain shed in a one-cross-one leno weave using super doup needles.

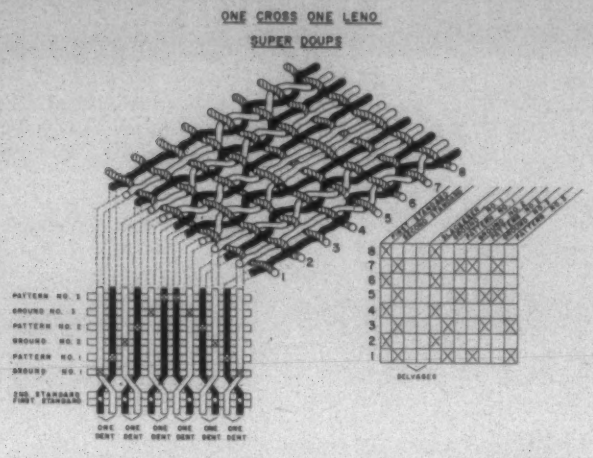


Fig. 30—This interesting leno weave uses one set of right and left-hand doups in combination. Pick one is an open shed with the second standard up. Pick two is a crossed shed with the first standard up.

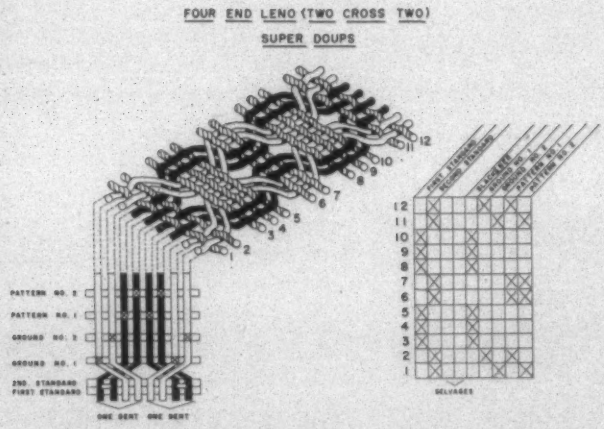


Fig. 31—This illustration shows a four-end leno, two-cross-two, in which picks three, four and five are crossed sheds with the doup ends up. Picks six and seven are open sheds. Super doups are required because picks one and two are plain weave.

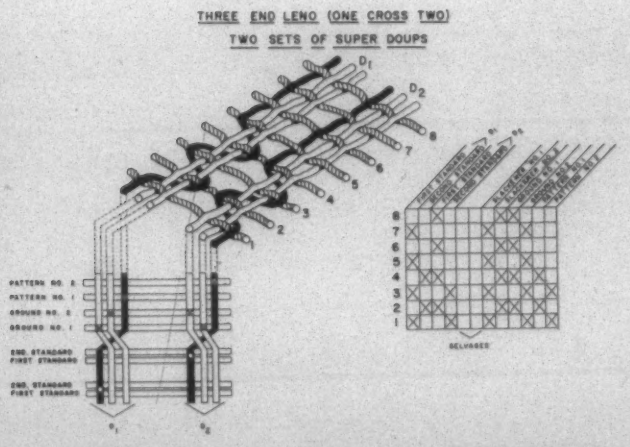
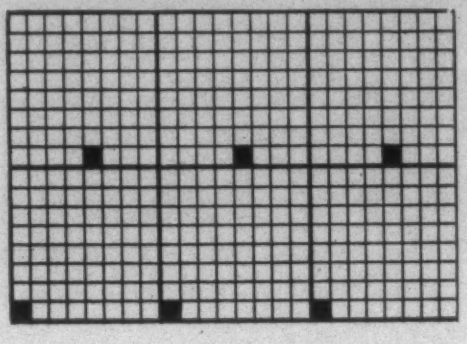
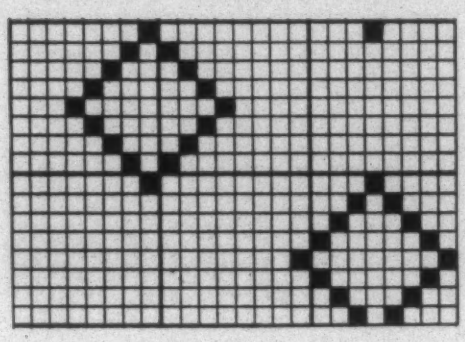


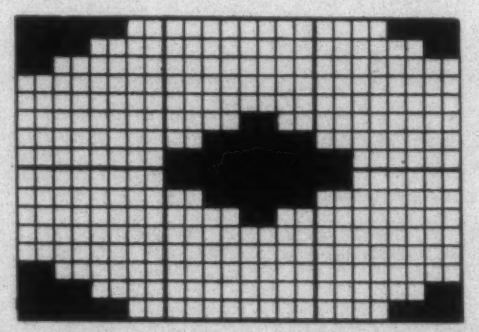
Fig. 32—This leno weave uses two sets of super doups. Both sets are right-hand doups and the doup ends must weave plain and out of character, with their respective ground ends.

the super doup needle. Also with this weave, some form of binding selvage must be used as there are two and three picks in a shed.

The drawing-in draft is complicated. The doup ends are a straight draw within themselves and the ground ends are







Figs. 33, 34, 35—These designs are examples of clip spot leno weaves.

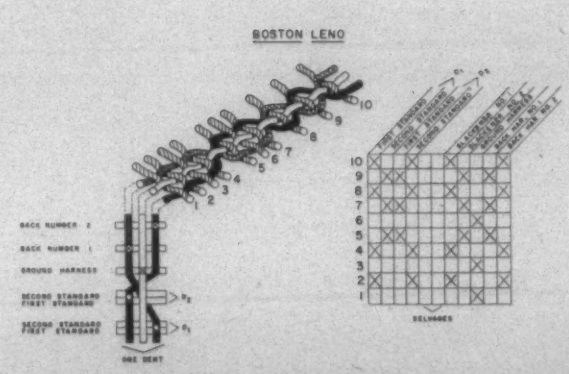


Fig. 36—The Boston leno, also known as Mission Net or Spanish Marquisette, basically has two doup ends weaving around a common ground end.

a straight draw within themselves. The four crossing ends must be reeded in the same dent.

Requires Two Sets

Fig. 32 shows a weave that used two sets of super doups. This weave looks fairly simple yet it requires two sets of doups. Both are right-hand doups and the doup ends must weave plain, out of character with their respective ground ends. This is impossible with one set of super doups. The use of left and right-hand doups, in combination, could produce much the same effect with only one set of super doups. It can be seen that much thought should be given to the lay-out of leno weaves in order to get the desired effect with the best loom set-up.

Clip Spot Leno

The marquisette curtain is serviceable but rather plain. In order to dress it up, with a minimum of designing, a very heavy filling is sometimes inserted. This is in addition to the regular fine filling to make the base or ground fabric. About two or three-hank roving is put in the shuttle with a very minimum of twist. Since most of these leno weaves are produced on the conventional 4 x 1 box loom, an even number of heavy and fine picks must be inserted. After the fabric is woven the long floats are sheared off and a small tuft or float is left.

The clip spot may take almost any form. It may appear as Fig. 33 which is imitation Dotted Swiss. Another may be in open design as seen in Fig. 34. Still another could be a solid design as seen in Fig. 35.

The usual principles of weaving clip spot apply here. The ends are down so the filling can float in the area where it will be cut during finishing. Also it is necessary to bind the heavy filling before and after the float, so that it will be anchored in the fabric after it is sheared. The let back is pegged to operate when the heavy roving pick is inserted. In such a low pick fabric a thin place would show up if this were not done.

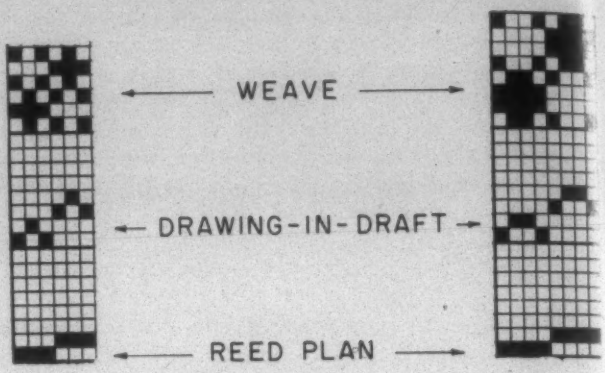
Boston Leno

The Boston leno is one of the most difficult leno weaves to make. It is also called Mission Net or Spanish Marquisette. Basically, it has two doup ends weaving around a common ground end. The drawing-in draft is rather complicated and makes possible the elaborate crossing. It is shown in Fig. 36.

Doup end one is drawn through the eye of D_1, but is drawn to the right of the standards of D_2 (not through the straddle formed by the first and second standards of D_2). Doup end two is drawn through the eye of D_2, to the right of the ground end and in the straddle between the standards of D_1. To make one shed (pick four), D_2 is up and on the right of the ground end while D_1 is up and on the left of the ground. D_1 makes a crossed shed and D_2 makes an open shed. The slackener must operate therefore for D_1. Pick five is the opposite arrangement. D_2 is up and to the left of the ground end, while D_1 is under D_2 and raised

on the right of the ground end. D_2 makes a crossed she and D_1 makes an open shed. The slackener must opera therefore for D_2.

As shown in picks one, two, three and four, all three en



Figs. 37 and 38—These illustrations show *(left to right)* designs for six and eight pick mock leno weaves.

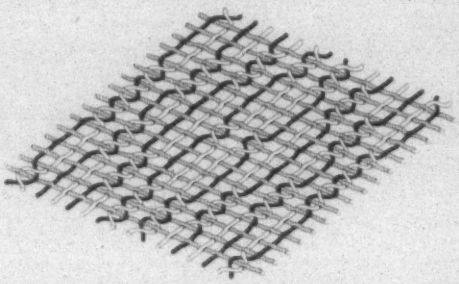


Fig. 39—This illustration shows a one-cross-one leno using right and left-hand doups in combination. The weave may be run on one set of super doups or four sets of regular doups.

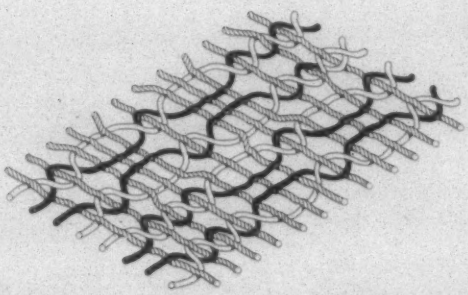


Fig. 40—This illustration shows a one-cross-one leno, using right and left-hand doups in combination. It may be woven on one set of super-doups or two sets of regular doups.

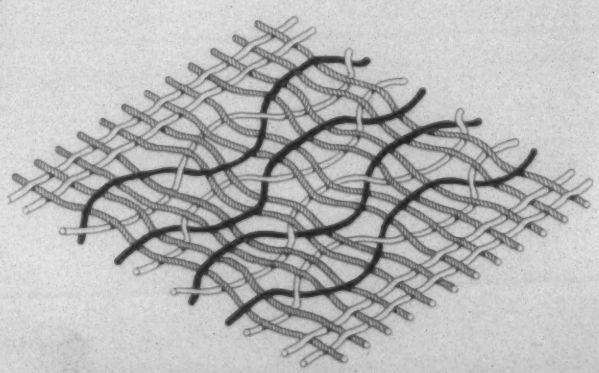


Fig. 41—This shows a one-cross-one leno weaving in combination with plain weave. Two beams may be necessary here.

ay weave plain. In the case of pick one and three both D_1 and D_2 are lowered and the ground end is raised. In oing from pick four to pick five, note that D_2 goes under ne ground end as in any other leno. However, D_1 goes not nly under the ground end but also under D_2 as well. This neans that the slackener for D_1 must let-off more yarn than he slackener for D_2.

No Doup Leno

An entirely different method of weaving leno has been leveloped by Dr. Hugh M. Brown, former dean of the School of Textiles, Clemson College. In this method no doup needles are needed. Another advantage is a full turn ieno may be made, that is, the doup end may go to the crossed shed then continue to rotate around the ground end instead of returning to the open shed. Unfortunately, one severe limitation is that it cannot weave a fabric with more than a sley of eight.

Russian Cord is a true leno having a doup end cross a ground end. The method uses a glass bead to control the crossing. It has not been used to any extent since the development of the steel doup needle. Cord or twine doups were

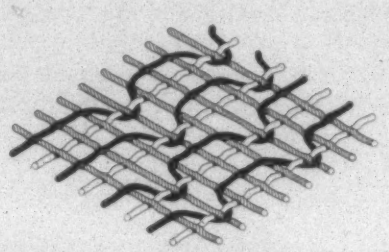


Fig. 42—This is a one-cross-one leno. Two beams are necessary here as well as two sets of doups.

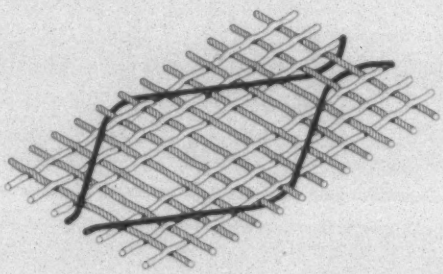


Fig. 43—This illustration shows a one-cross-three weave which may be made on one sets of doups. Right and left-hand doups are used together. A jumper motion is not needed and the cloth would probably be woven face down.

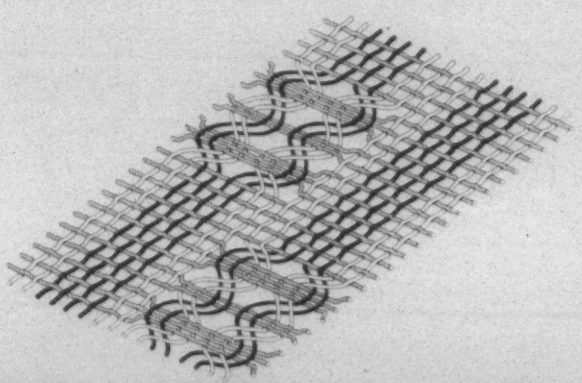


Fig. 44—This drawing shows a two-cross-two leno weave. Super doups are required for this weave since the doup ends weave plain in some areas.

used exclusively in the U. S. until the steel doup was invented. Today they are seldom seen.

Mock Leno

No book on true Leno would be complete without a mention of mock leno. As the name suggests, it mocks, or imitates the true leno. *Callaway Textile Dictionary* defines mock leno as "A kind of weave which produces open or mesh effects in the cloth somewhat like that made by a true leno weave. The effect is due partly to the way in which the threads interlace and partly to the method of reeding."

Mock leno may be woven on conventional looms with regular heddles and no special attachments are needed. It produces a fabric which will appear much like the true leno but does not have as good strength or form stability as the true leno.

The mock lenos are a family of weaves too. They may be woven by themselves or in combination with other weaves. When useed in combination, the ground weave may be plain with the figure developed by the mock leno weave, or vice-versa. Fig. 27 shows a mock leno weave. The conventional method of showing the weave drawing-in draft and chain plan is used. This is the six-pick mock leno. Fig. 38 illustrates the eight-pick mock leno weave. In both the six-pick and eight-pick mock leno weaves the reeding and interlacings account for the grouping of the ends together.

Appendix

Some fabrics have leno weaves inserted in different areas to create an interesting effect or to produce a desired pattern. Others have a leno weave throughout (generally one-cross-one) and are more or less a standard fabric. These are made by many textile mills. The list below will show some of the more common fabrics that are woven with a leno weave.

Width (in.)	Yards Per Pound	Ends x Picks	Warp Yarn No.	Filling Yarn No.
		Mosquito Netting		
58	13.75	20 x 10	30	32
58	9.62	28 x 14	30	32
68	9.21	28 x 14	30	32
108	5.17	28 x 14	30	32
		Marquisette		
28	18.00	52 x 34	120/2	120/2
29½	11.17	59 x 32	80/2	80/2
36	5.50	42 x 30	20	12
36	6.90	36 x 18	20	12
45	9.53	50 x 36	100/2	100/2

It would be impossible here to show all the possible leno weaves, as there are so many variations and combinations in this family. Additional weaves are shown in Figs. 39-44.

S. C. Cotton Maid Contest Dropped

"Lack of financial support" is the reason given for the dropping of the Maid of Cotton contest in South Carolina. The contest has been staged in the state since 1949 and produced one national winner, in 1950. The S. C. Textile Manufacturer's Association, a contest sponsor, said that state contestants might submit applications to national contest headquarters in Memphis, Tenn.

Temperature Without Touching

By BURTON B. RITCHEY
Minneapolis-Honeywell
Regulator Co.
Philadelphia, Pa.

Since the friction caused from cloth moving against the sensing tip of a temperature measuring device may generate heat and produce inaccurate readings, an arrangement for measuring temperature without contacting the cloth is desirable. This article points out that this can be done with the use of a radiation pyrometer. It tells how the instrument works and lists conditions which must be met for its proper operation.

CLOSE measurement and control of the temperature of moving textile materials is necessary today for economical processing without loss of product quality. Because today's dryer temperatures are higher, because new resin coatings require curing at a specified temperature for a fixed time, and because nylon must be properly heat set to obtain some of its most saleable qualities, the danger of damaging goods by excessive heating has become very real.

But measurement of moving fabric temperature is not a simple matter. Several complications arise if the temperature of moving cloth is measured by contact. First, the motion of the cloth against the sensing element tip may generate added heat by friction and give an inaccurate reading. Second, a lack of stiffness of the cloth prevents a good contact between the measuring element and the fabric. Last, a relatively small element cannot measure enough cloth area for true accuracy and a large thermocouple, being metal which conducts heat faster than cloth, would remove heat from the cloth faster than the cloth could conduct it to the contact point. This would bring the temperature at the contact point below the actual temperature of the cloth and again result in an inaccurate measurement.

However, temperatures of moving textiles need not be measured by a contact element. Actual cloth temperature can be measured without contact by a radiation pyrometer.

What's A Radiation Pyrometer?

The radiation pyrometer converts heat radiated from a fabric to a small electrical signal proportional to fabric temperature. To understand its operation, some discussion of radiant energy and its properties is necessary. All objects which are warmer than absolute zero (minus 459° F.) radiate heat energy. Conversely, all objects are capable of absorbing radiant energy from other bodies at higher temperatures.

The amount of energy radiated from a body depends on its temperature, its composition and the condition of its surface. In general, the more reflectance shown by a body,

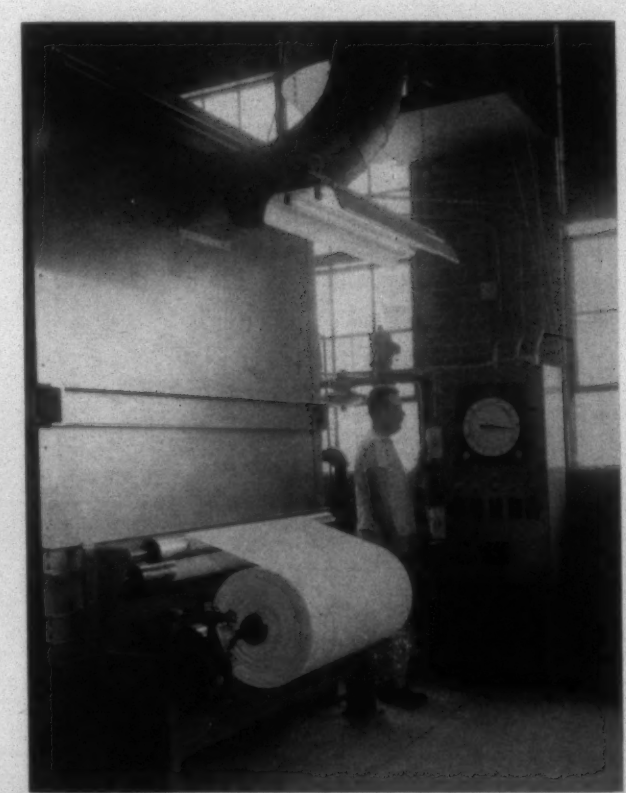


Fig. 1—In this nylon heat setting operation, temperature of the moving material is measured by a low range radiation pyrometer, and indicated and controlled through the recording potentiometer on the wall behind the operator—all within a few degrees and without contact with the cloth.

the lower will be the quantity of heat emitted—as it will reflect rather than absorb heat. Thus, an object with zero reflectance will emit or absorb the greatest quantity of energy. Such an object is known as a blackbody and is said to have an emissivity of 1.0 or 100 per cent. Since most common materials are not blackbodies, and show emissivities of less than 100 per cent, emissivity is usually defined as the ratio of radiant energy emitted by a body to that which is emitted by a blackbody at the same temperature. This measurement is often expressed as "per cent emissivity."

The radiant energy emitted at the low temperatures encountered in the textile industry is quite different from that emitted at high temperatures, including the visible spectrum (light). Fig. 2 shows the wave length distribution of energy at various low temperature levels. The radiant energy at these temperatures is entirely outside the visible range, unlike the radiant energy from a red hot iron bar.

Personal experiences demonstrate this, since you can feel radiation you cannot see. To confirm this and mark a difference between low and high temperature radiant energy, let's take the case of a Pyrex baking dish. The Pyrex is transparent to both light and high temperature radiation (and therefore has a very low emissivity *in that range*). But, if that dish is heated to 350° F. during baking, though you can't see the radiation, you can definitely feel heat coming from it. In this range, Pyrex is actually opaque and absorbs radiation readily. Thus, at comparatively low

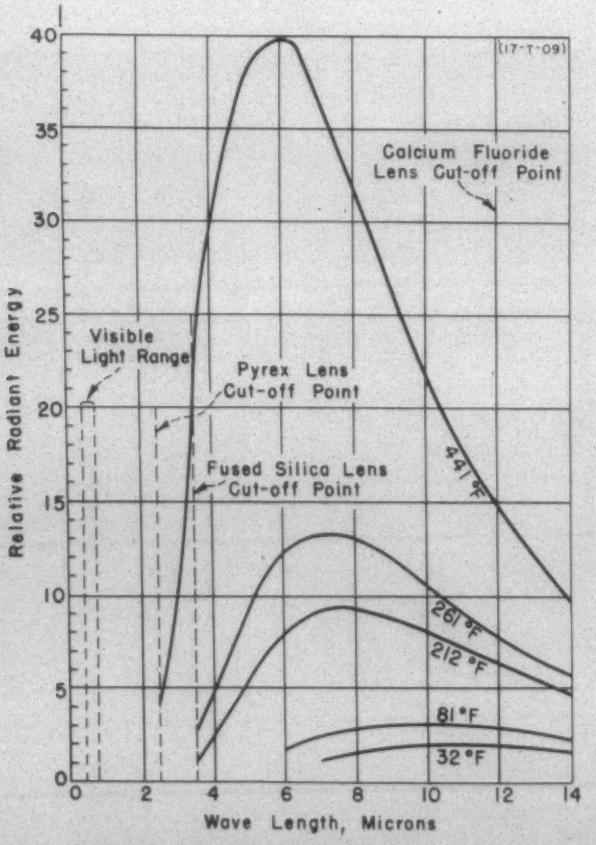


Fig. 2—Visible light waves fall considerably below the wavelengths encountered in low-range temperature measurements. Thus, though Pyrex may be transparent to light, it absorbs and re-radiates heat in the lower ranges.

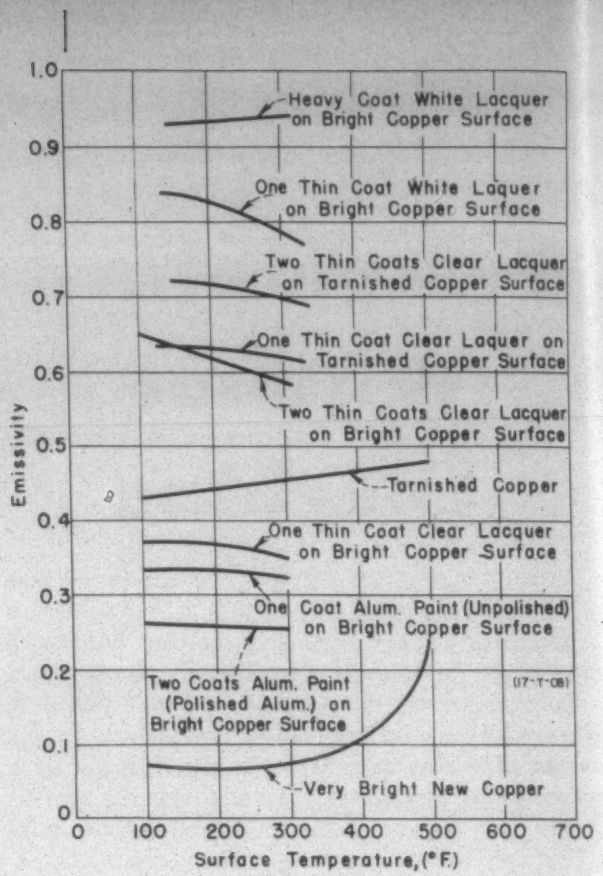


Fig. 3—Emissivities of copper, uncoated, coated and tarnished, versus temperature.

temperatures, transparency to light is not a measure of emissivity.

Transparent films of cellulose derivitatives are somewhat similar to glass in their opacity to low temperature radiation. Fig. 3 shows that a clear lacquer is far less transparent to low temperature radiant energy than it is to visible light. In fact, the emissivity of this material is rather high, as shown by the fact that two thin coats of the lacquer on bright copper raises the emissivity from less than ten per cent to approximately 60 per cent.

Further, the visible color of a surface is obviously not an indication of its relative emissivity at low temperatures. Fig. 4 shows the emissivities of several paints and refractory materials. Notice that the black paint used actually has a lower emissivity than other colors in the 200 to 400° F. temperature range. However, dull or flat black paint is still a good "emitter" and is actually used as a reference standard in some cases.

Radiation Characteristics Of Textile Fibers

Some data has been collected on the emissivity of sized cotton yarn while it is passing over a stainless steel cylinder. The sets tested were 2300 ends of cotton 9s at 260° F., 4500 ends of cotton 30s and 5000 ends of cotton 45s; the latter two at 250° F. The tests were made by sighting the radiation pyrometer first at a stripe of dull black paint on the cylinder and then a sheet of warped yarn. In all instances the recorded temperature dropped less than five degrees as the sighting of the unit was changed from black paint to cotton yarn. The color of the yarn made no ap-

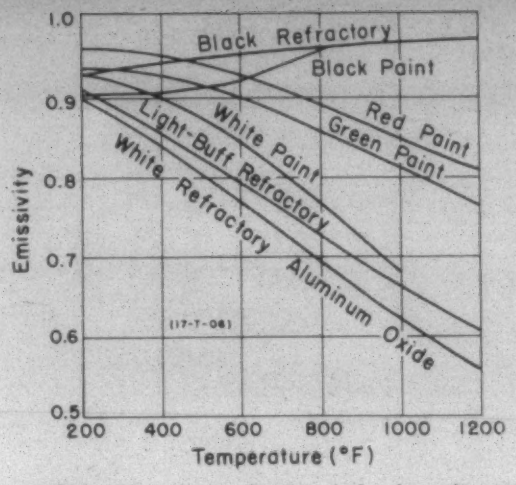


Fig. 4—Emissivities of several paints and refractories versus temperature. At low ranges, black is not necessarily the best "emitter."

parent difference to the reading. Further, as was expected, the results were the same whether the yarn was moving or stationary.

Tests have also been conducted on various nylon fabrics with the result that close woven nylon fabrics show an emissivity of approximately 90 per cent, and should lend themselves very well to use with a radiation pyrometer. However, such open weaves as nylon net may not be measurable if too great a percentage of their actual areas is open space which, of course, does not emit radiation. Fortunately, most textiles have a high degree of emissivity, and for a particular type of product, will not change enough to affect measurement.

The Brown Radiamatic Unit

The only radiation pyrometer available for industrial measurement of relatively low temperatures is the Brown Low Range Radiamatic unit. It will produce satisfactory results on a number of textile fabrics if the following six conditions are met:

(1) Work temperatures must lie between 100 and 600°F.

(2) Emissivity of the surface sighted upon must be reasonably high and must remain relatively constant.

(3) The temperature around the sensing element must be below 120° F. or can be air cooled.

(4) The target area sighted upon must be ample in accordance with values given.

(5) The pyrometer must "see" the only work; that is, the reflected radiation must be eliminated by shielding if necessary.

(6) Excessive dust, smoke or water vapor must be kept out of the pyrometer line of sight. (Where these things are present in the line of sight, they can sometimes be eliminated by air purging.)

Even where all these conditions are not met, it is possible in some cases to use the pyrometer. For example, some users are measuring temperatures as low as 32° F.

Radiamatic Components

The Brown Radiamatic pyrometer system comprises three basic components: a low-range Radiamatic unit; a reference

junction temperature controller; and an ElectroniK potentiometer. The last may be any of the conventional strip or circular chart recording models, with or without pneumatic or electric control.

Operation of the system is as follows. Heat radiated from the object whose temperature is to be measured is focused by a lens upon the measuring junctions of a group of small thermocouples which create a minute voltage. This group of thermocouples is called a thermopile. A potentiometer receives this voltage and amplifies it in the conventional manner to operate the recording pen and, if control is included, to actuate the controlling means—such as a mercury switch. In the case of the most popular application to date, control of nylon heat setting, one of several electric control forms is used depending on the setter employed. These control units proportion the electrical current to the heaters to maintain a constant tenter temperature within one or two degrees.

To eliminate the effects of ambient temperatures on the thermopile, a temperature-sensitive resistance winding and a heating element are included in the detecting unit. The reference junction temperature controller operates from a resistance winding to control power to the heating element so that the head is maintained at a constant temperature. These elements are shown in Fig. 5. Thus, the unit is responsive only to radiation focused upon its thermopile. If ambient temperature at the head is higher than 125° F., the head can be cooled by air cooling or a water jacket.

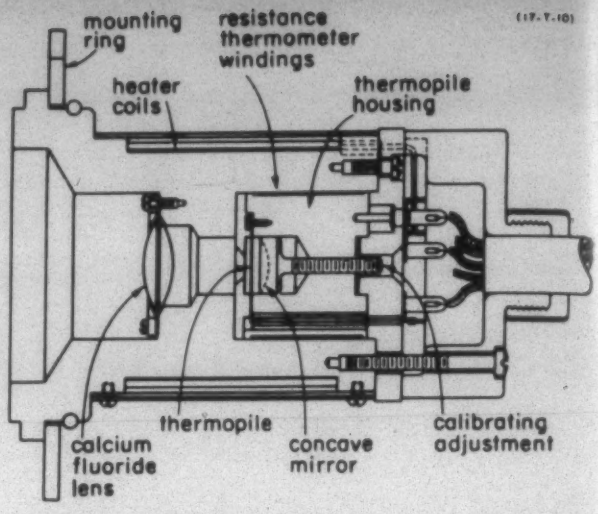


Fig. 5—The internal parts of the Brown Low Range Radiamatic unit used in textile applications.

Today, most applications of low range radiation pyrometers have been to nylon heat setting and resin curing operations. But, because of the many applications in the textile industry where temperature of moving fabrics should be measured, and because of the adaptability of a radiation pyrometer to this service, this measuring system should be very useful in many other situations. Although general rules can be given for its adaptation to various measurement and control problems, specific application data will usually require a brief survey by a trained instrument engineer.

Buying A Second-Hand Print Machine?

Here's A Checklist To Use In Looking It Over

By JOHN H. MACK

DUE to the considerable number of textile plants being liquidated, a great number of used printing machines are currently for sale. A few of these machines are being purchased for new operations or as additions to present facilities. A great number of things should be considered in the purchase of used printing machinery. Ignorance of these things, or lack of consideration of them, may result in the purchase of equipment that is entirely unsatisfactory.

In this article the author, a veteran of 22 years in printing and finishing, points out that there are a number of used printing machines for sale currently. Many points must be considered in intelligently purchasing a used printing machine such as: (1) age of machine; (2) condition of nip tracks; (3) head stocks; (4) side frames; (5) mandrels; and (6) doctor blade shears. The article tells how and what to inspect and gives some conditions which make used printing machines totally unacceptable.

For a printing operation in the U. S. it is advisable to purchase machines which are manufactured in the U. S. In this way replacement parts are readily available. Most foreign built machines are equipped with parts, such as bearings and screws threads, which are not standard in this country.

A used print machine should be carefully and thoroughly inspected by a capable person before purchase. This person should preferably be a printer. Among the points for consideration is the age of the machine. Although very few major changes in print machines have been affected in the past 100 years, the older machines are more difficult to modernize and there is greater danger of failure from fatigue in the metal.

One of the most important things to inspect are the nip tracks. Each nip of a print machine is equipped with top and bottom tracks on which the head stocks travel as they

e screwed up or down in making contact between the int roll and the cylinder. These tracks are made of steel d are built into the cast frame of the machine. Print achine manufacturers say that these tracks cannot be re-laced. They are precision built and any great amount of ear will cause the head stock to wobble and consequently pair the registration of patterns printed in the machine. any of the tracks are bad in any of the nips, except the st and last ones which are generally used as a drag and a ush roll, the machine should be rejected at once.

ead Stocks

The head stocks should be tight and free of wobble. If ey are in bad condition they may be replaced provided e nip tracks are in good condition. Head stocks are made f cast iron or semi-steel. They can usually be made in a ocal foundry.

The nips should be thoroughly inspected for cracks or evidence of old breaks which have been repaired. Quite often a nip is broken off and welded back in place. When this happens it is very difficult to align properly and poor pattern registration may result. It is wise to reject a machine with such repairs.

The side frames and cylinder should be examined for cracks. Repaired cracks may also be a source of future trouble. While this is important it is not as vital as repaired or cracked nips. A cracked side frame or cylinder can give good service if it is properly repaired. Such a repaired machine should be rejected if there are others from which to choose.

Cylinder Bearings

The cylinder bearings and journals should be thoroughly inspected. The bearings can be replaced if necessary but it is quite a difficult operation to repair the shaft journals if they are worn or cut from poor care and lack of lubrication. If journals are bad the machine should not be purchased unless repair facilities are known to be available in the vicinity of installation.

The steel shaft on which the print roll is pressed, known as mandrels, should be inspected for beat up ends which may result from the use of a sledge hammer when the rolls are pressed off. Also the mandrels should be inspected for evidence of being sprung. A sprung mandrel can cause poor pattern registration. The type of steel should be requested if this information is available. The keyway should be in good condition. Journals should be inspected for wear and evidence of having been overheated from lack of lubrication.

Doctor Blade Shears

The doctor blade shears, or holders, should be inspected for bad journals, beat up condition and for alignment. The size of motor, horsepower and type of current required by the motor should be given careful consideration. Quite a few used print machines will be found underpowered. It is entirely possible that the motor may have to be repaired in order to have enough power for correct operation of the printing machine.

The amount and condition of drying equipment which goes with a used print machine is an item not to be passed over lightly. There should be a minimum of six four-foot

or four seven-foot drying cylinders. These cylinders should give a surface temperature of 250 degrees F. The surface of the drying cylinders should be smooth and free of indentations since these do not allow full contact between the cloth and the cylinder. This, of course, detracts from the drying capacity of the cylinder.

If the machine is equipped with auxiliary drying equipment such as ovens, hot flues, or infra-red lamps in addition to the drying cylinders it may permit higher printing speeds. It is recommended that a good maintenance mechanic inspect steam joints, bearings, etc., on drying equipment before purchase.

If the machine is equipped with a blanket it should be determined if it is the proper type required for the work it is to run. The blanket should be inspected thoroughly for damage, evidence of length of use, amount on the cylinder and resiliency. If the machine is equipped with a blanket washer it should be inspected for condition of squeeze rolls, condition of bristles in all brushes and condition of all bearings. Blanket washers should be thoroughly overhauled before being placed in operation.

Burning Shirt Brings Suit

Dan River Mills Inc. and J. C. Penney Co. Inc. are being sued for a total of $475,000 by a Florence, Ala., man on behalf of his 15-year-old son who, it is charged, was severely burned when a shirt he was wearing exploded. The suit charges that Dan River manufactured the shirt and that it was sold in the J. C. Penney store in Florence. Burns suffered by the youth on August 20 are said to prevent him from eating normally. The shirt is said to have become a torch when it came into contact with a flame and the wearer suffered burns covering most of his body.

Charter Granted Wash-Wear Testing Firm

A new company, whose purpose is research and testing of wash-and-wear fabrics for the textile industry, has been granted a charter by the State of North Carolina and is setting up operations near Oteen, just outside Asheville. Known as the Textile Research and Development Corp., the firm has a capital stock of $100,000 and is headed by George Fine of New York City and Asheville.

A building in Oteen has been purchased and is now being remodeled and air conditioned. With the installation of various fabric testing machines the plant will be prepared to show by photographs which processes should be used to supply the best materials.

More Textile Jobs In August Than July

August employment of production workers in the textile-mill products industry rose significantly over the July level but was still substantially under the year earlier according to figures released by the Bureau of Labor Statistics. The August 1958 figure was 860,200 against 829,600 for July 1958 and 912,000 for August 1957.

These workers averaged $58.89 weekly for 39 hours at $1.51 hourly for August. Textile workers in July averaged $1.50 per hour for 38.5 hour week which amounts to $57.75 per week.

A New Series

Organized Plant Lubrication

Part I

By R. K. GOULD
Research & Technical Dept.
The Texas Company
Beacon, New York

TODAY, more is being said, written, and done about organized plant lubrication than ever before. The current interest and enthusiasm in this subject is not due to some sudden impulse. It is simply the culmination of a slow but steady awakening of all concerned, including plant managements, to the many facets and ramifications of plant lubrication and the benefits to be derived from an efficient lubrication program.

As has been pointed out by so many, so often, ideal lubrication is achieved by applying the *right amount* of the *right lubricant* to the *right place* at the *right time*. Although this is simple in principle, it frequently is quite complex to put into practice.

Many factors are involved in the lubrication of industrial equipment, some of which are readily apparent while others are more obscure. Some of the major factors include: (1) determination of the lubrication requirements of the equipment; (2) selection and purchase of lubricants; (3) storage and handling of lubricants; (4) application of lubricants; and (5) preventive maintenance practices. In its broadest sense, organized lubrication simply represents a concerted effort to co-ordinate and consolidate all of these factors in such a manner as to make the practice of lubrication conform as nearly as possible to the ideal. This will not happen by chance. It will not occur automatically. It can be accomplished only by careful planning, design and supervision.

Benefits

Establishing a sound, efficient lubrication program is not necessarily an easy task. In fact it can be quite complex and involve the expenditure of considerable time, effort and money. Is it worth it? Even under the most haphazard, disorganized circumstances, the various elements relating to lubrication might be performed. Lubricants could be purchased, right or wrong, and somehow or other the equipment might be lubricated and kept running most of the time. What, then, is to be gained by going to the trouble and perhaps expense of setting up an elaborate lubrication program?

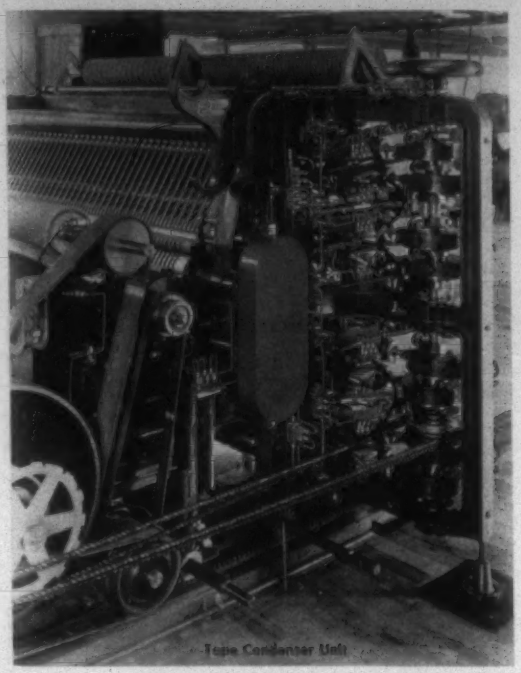
The benefits to be realized from an organized lubrication program are both substantial and far-reaching and what is more important, they can be translated directly into *cash savings*. This is not theoretical speculation. It is an established fact. More evidence is being accumulated every day to substantiate these claims. In some cases, the savings that have resulted are almost beyond belief.

In order to give some idea of the order of magnitude of these benefits, savings in operating costs equivalent to from ten to 100 times the purchase price of the lubricants themselves have been reported. Where do savings of this magnitude appear? Actually, they show up in numerous areas, some of which are: (1) cost of lubricants; (2) maintenance cost; (3) decreased downtime; (4) fewer seconds; and (5) increased equipment life.

Although a good lubrication program will make use of quality lubricants which may have a higher unit price than the products used previously, the total cost of lubricants usually is less because the quantity used is smaller. The decreased amount used results mainly from less waste due to proper handling and application techniques and to longer life of the quality lubricants. For hydraulic use, for example, experience has shown that a premium type lubricant, inhibited against rust, oxidation and foam, will have a service life at least five times greater than a highly refined straight mineral oil.

The cost of maintaining equipment represents a substantial portion of the total cost of operating a plant. Here is an area where the benefits of a lubrication program can be

This thorough analysis of the value of organized plant lubrication will appear in three installments beginning this month and will tell what can be gained by such a program, how to organize a program and how to apply lubricants properly. Photographs of various pieces of textile equipment are contained in the article showing how centralized lubricating systems fit into such a program. Some of the benefits of organized lubrication described in the first installment are: (1) cost of lubricant; (2) maintenance cost; (3) decreased downtime; (4) fewer seconds; and (5) increased equipment life.



This view of a centrally lubricated Tape Condenser Unit illustrates that few, if any, pieces of textile equipment are too intricate for such a system. The lubricant is supplied through lines to the bearings directly from the drum by pump. *Photo courtesy Lincoln Engineering Co.*

realized soon after the program gets underway. The role of good lubrication practices in reducing maintenance costs is not always understood and consequently is frequently underestimated by those concerned. Actually, the difference between maintenance costs associated with good lubrication practices and the corresponding costs associated with bad lubrication practices is, in many cases, phenomenal.

Nonscheduled shutdowns of machines can be very costly. Not only do repairs and maintenance represent out-of-pocket costs but an idle machine does not produce. This means loss of production, loss of sales and loss of profits. In a plant which is highly automated, where machine operations are closely integrated, it is mandatory that downtime be reduced to an absolute minimum. Proper lubrication is one of the best means of keeping the equipment going and saving the high costs of downtime.

Materials that must be rejected because they don't conform to specifications represent an item of considerable expense. Even though they may be salvaged by reworking, handling and production costs have been increased. A second represents an "almost but not quite." Usually, the difference between acceptance and rejection is extremely small. Not always, certainly, but in many cases, this difference is due to some erratic operation of the equipment which could have been prevented by proper lubrication.

Equipment Life

A piece of machinery represents a sizeable investment. In order to realize the greatest return on this investment, it must be kept in service as long as possible. It has been well established that proper lubrication combined with good preventive maintenance practices is the most effective means of extending equipment life.

These, then, are some of the areas where the benefits of organized, intelligent lubrication are converted directly into substantial cash savings. There are also other benefits which are just as real but upon which it is difficult to place a monetary value.

One doesn't normally associate lubrication with morale but the two are very definitely tied together. Proper lubrication will go a long way toward improving production and general plant operations. A smooth running plant is likely to be a happy plant. The personnel will take more of an interest in their work. Morale will be high. Furthermore, a plant of this type will be a safe plant. It is much less likely to be a breeding ground for accidents.

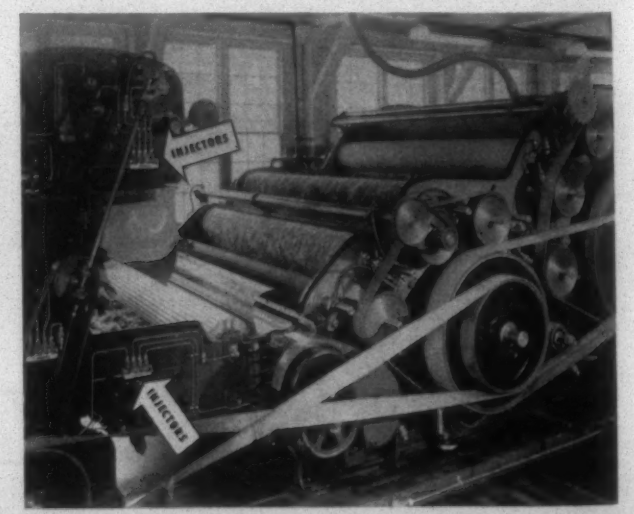
Thus, the benefits to be realized from a controlled, organized lubrication program are many and varied, both tangible and intangible. In practically every case on record, the results obtained from a planned lubrication program have been most gratifying and have exceeded by far the most optimistic expectations.

Management's Role

Any project, such as a planned lubrication program, whose success depends upon the close co-operation among personnel in different groups or departments, must have the sound backing and general supervision of management. Management must recognize the necessity of such a program and everyone up and down the line should be aware of it.

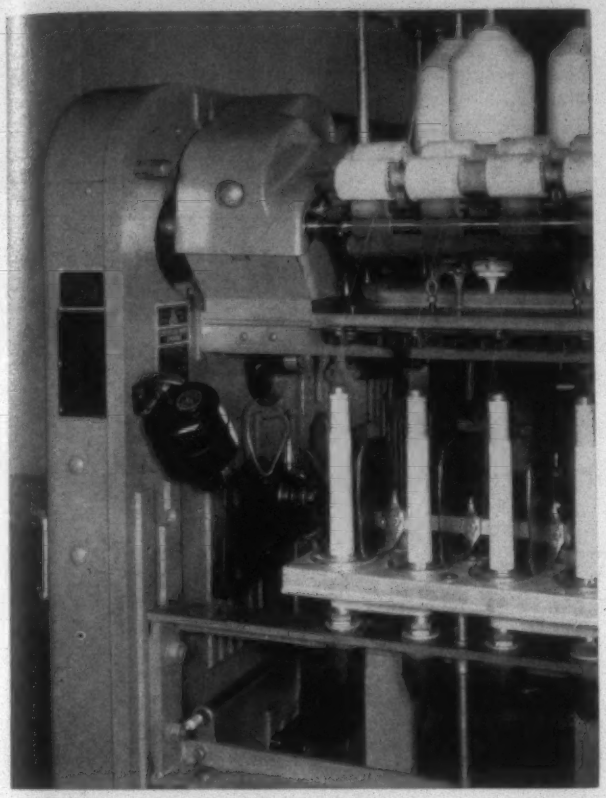
The failure of management to appreciate the full significance and over-all benefits of planned lubrication has been the main reason why it has taken so long for the principle of organized plant lubrication to gain acceptance. Not being lubrication experts, management can hardly be expected to be familiar with all of the aspects of lubrication and to recognize instinctively the differences between good and bad lubrication practices and the consequences of each. To many, one lubricant is the same as another and price is the determining factor. Others may recognize that there are differences among lubricants but assume that the purchase of proper lubricants automatically assures that proper lubrication will be achieved.

Consequently, management must be sold on the fact that organized lubrication is actually a tool for saving money



Lubricant is supplied to vital places on this feeder and garnett by Lincoln Engineering Co. supplied injection system. The lubricant is delivered directly to the bearings from the drum by pump reducing spillage to practically nil.

and at the same time a means of improving operations in general. It must be brought home to them that attempting to promote savings solely through the purchase price of lubricants is false economy. It must also be made clear that the mere purchase of the best lubricants will not in itself assure satisfactory lubrication. Management must realize



This Saco-Lowell controlled draft spinning frame is equipped with a Bijur central lubricating system.

all of the factors associated with plant lubrication and understand that organized lubrication means controlling and co-ordinating all of these factors. Finally, management must be convinced that the merits and benefits to be gained from organized lubrication are real and significant and are well worth the time, effort and investment that may be involved in establishing such a program.

Who Benefits

It is generally assumed that organized lubrication is intended only for the larger plants. This is an utter misconception. There are no limits to the size of a plant that can take advantage of planned lubrication. The benefits can be enjoyed by the small and large alike. Actually, percentage-wise, the savings realized by relatively small plants frequently are greater than those recorded by the larger plants.

Once management has decided to embark upon a planned lubrication program, the responsibility for organizing and administering the program must be specifically delegated. This is an extremely important assignment. The ultimate success of the project will depend upon establishing a sound, carefully conceived plan and following it to the letter. The job requires a specialist.

A lubrication engineer is the obvious choice for this assignment. He is well grounded in both the theory and

practice of lubrication and consequently he is well qualified to design and administer a plant lubrication program.

Are the potential savings and over-all benefits anticipated of such magnitude as to justify the salary of a full time lubrication engineer? This is an obvious question and the obvious answer is that it depends upon the size of the plant. Although there are no hard and fast rules in this regard, it is generally agreed that plants with an annual budget of $100,000 or more for production maintenance can use a full time plant lubrication engineer to advantage.

For smaller plants which may not be able to justify a full time specialist, a maintenance superintendent or foreman is the logical choice to head up the program. Although the principles involved in designing a lubrication program are the same regardless of the size of a plant, the details are much easier to work out for a small plant than for a large one. In setting up the program itself, advantage should be taken of the lubrication engineering service offered by the lubricant supplier, whose engineers are well versed in all phases of plant lubrication and can be of great assistance in planning an efficient lubrication program. Once a program has been established, it can be administered by the maintenance foreman or superintendent.

(To be continued)

Promotions, Resignations, Honors, Transfers, Appointments, Elections, Civic and Associational Activities

PERSONAL NEWS

Meigs C. Golden

To expand its sales and technical effort to the textile industry, Roberts Co., spinning machinery manufacturer of Sanford, N. C., has appointed a new assistant sales manager and four sales engineers. Meigs C. Golden, for five years in the sales department at Sanford and most recently sales representative in Virginia and the Eastern Carolinas, has been promoted to assistant sales manager. He is a graduate of the University of North Carolina and has had ten years' experience in textile machinery manufacturing and sales. . . . R. Frank Walker, who had been on special assignment as general manager of Starkville (Miss.) Mills Inc., has returned to Roberts Co. to handle sales in south Georgia and Alabama. His headquarters are in Columbus, Ga. . . . Meade O. Bradshaw, most recently sales manager of Burlington Engineering Co., Graham, N. C., is now the Roberts representative in north Georgia-Alabama and western Tennessee, living in Athens, Ga. He previously held sales engineering and managing positions with Bahnson Co. and Reeves Pulley Co. He is a mechanical engineering graduate from Virginia Polytech-

Meade O. Bradshaw

Robert L. Carroll

nic Institute. . . . Robert L. Carroll, formerly Southern sales manager of U. S. Bobbin & Shuttle Co., has beeen appointed sales engineer for Roberts Co., with his headquarters in Greenville, S. C. In addition to serving textile mills in that area, he will also be responsible for the spinning machinery firm's expanding technical efforts on equipment for the primary synthetic fiber producers. . . . William A. J. Peacock, former vice-president in charge of manufac-

R. Frank Walker

W. A. J. Peacock

turing at Borden Mfg. Co., Goldsboro, N. C., and for the past few months the Roberts Co. representative in south Georgia and Alabama, has returned to Sanford to handle the Virginia and eastern Carolina territory. A graduate in textile manufacturing from N. C. State, he was connected with Burlington Mills for several years as an industrial engineer.

W. Ray Shockley, for the past two years Georgia and Alabama public relations field representative of the American Cottton Manufacturers Institute, has been transferred to the Charlotte, N. C., A.C.M.I. office as assistant to the secretary-treasurer. Succeeding Shockley will be James M. Hale, state news editor of the *Atlanta Constitution*. Shockley is a graduate of the University of Georgia and a veteran of World War II. He worked on newspapers in Gainesville, Augusta, Athens and Atlanta, Ga.

Martin H. Gurley Jr. has been appointed to the newly-created position of new product analyst of the Vulcan Rubber Products Division of Reeves Bros. Inc. Gurley, who has assumed his new responsibilities at the company's Buena Vista, Va., plant, will be responsible for research and analytical work in connection with the development of new products and product applications of the division. A Harvard graduate, with an A. B.

degree in chemistry, Gurley has held several positions as a research executive and consultant. He was previously general manager of the Textile Division of Thermoid Co., Trenton, N. J.

Lewis A. Root

Lewis A. Root has been appointed sales manager for Lindly & Co., Mineola, N. Y., according to an announcement by H. C. Lindemann, president. For 13 years prior to joining Lindly, Root was in sales management positions with organizations producing electronic and electro-mechanical control systems. He was most recently affiliated with J. A. Maurer Inc., where he served as sales manager.

Paul A. Homier has been named superintendent of the Callon Plant of Callaway Mills, LaGrange, Ga. He joined the company in 1957 as a sales engineer. Homier is a graduate of Fordham University and did graduate work at the University of Buffalo and Rutgers University.

Harold Marks has joined James Talcott Inc., one of the country's oldest and largest commercial financing and factoring organizations, as a new business representative in the New York office. Marks has been associated with the textile industry for many years on the manufacturing and converting level, and from 1946 to 1956, operated his own dress manufacturing business, Harold Marks Co. He will concentrate on soliciting new factoring accounts for Talcott in the textile field.

Ferdinand M. Johnson has joined Cone Mills Corp., Greensboro, N. C., in the newly-created position of administrator of the company's research and development division. He had previously worked in research and development with Whitin Machine Works and Pacific Mills. Johnson's most recent position was head of fabric development and the pilot plant of M. Lowenstein & Sons in Lyman, S. C.

George B. Wright has been named district manager for Georgia by Puritan Chemical Co. He formerly represented the company at Greenville, S. C., and will supervise company representatives throughout the state of Georgia with the exception of the city of Atlanta. Wright joined the company in 1956. He is a graduate of the University of South Caroina.

Thomas N. Ingram

Thomas N. Ingram, assistant to the secretary-treasurer of the American Cotton Manufacturers Institute, has been elected assistant secretary-treasurer of the North Carolina Textile Manufacturers Association. Ingram, who had been associated with A.C.M.I. for 6½ years, is assistant to Hunter Marshall of Charlotte, who has been with the N.C.T.M.A. for 41 years. Halbert M. Jones of Laurinburg, who is president of both the institute and the North Carolina association, announced the election of Ingram and said the N.C.T.M.A. was fortunate to secure the services of Ingram. He is a graduate of Virginia Polytechnic Institute. Before joining the staff of A.C.M.I. he had been with Chadbourn Hosiery Mills, now Chadbourn Gotham Corp., Charlotte.

Russ P. Arnold has been named manager of the Roanoke Weaving Plant, Vinton, Va., of Burlington Mills. Arnold succeeds Willard Burrow, who has been transferred to Wilkes-Barre, Pa., as manager of Hess, Goldsmith & Co. there. Arnold has been manager of Burlington's Branger Plant in Valencia, Venezuela, for the past three years and has been with the company since 1937.

A. D. Robinson, executive vice-president of Kerr Bleaching & Finishing Works Inc., Concord, N. C., has resigned, according to an announcement by John Odell, president and treasurer of the company. Robinson had been with the company since 1945 and was previously associated with Union Bleachery. His immediate plans have not been disclosed.

J. C. Childers, executive vice-president of Erlanger Mills Corp., has been placed in charge of the company's operations in Lexington, N. C. He replaces Smith Crow Sr., who retires October 1 as vice-president in charge of manufacturing after 54 years in the textile industry. Childers has been associated with the company since 1932 and has been in charge of merchandising, styl-

ing, costs and raw materials purchases. Crow will continue to serve on the company's board of directors. . . . James McCutchen has been named plant manager at Erlanger's Lexington operations, a newly-created position. . . . Horace W. Buchanan, plant superintendent, will retain that position but will also represent Erlanger Mills on a new manufacturing committee being formed to promote closer co-operation among the three spinning and weaving plants associated with the Erlanger chain.

Fred L. Connell

Fred L. Connell, who for the past 13 years has been affiliated with the Southern office of Crescent Corp. as sales engineer and then as assistant manager, has resigned to establish his own textile machinery business. He will do business under the name of Connell Machinery Co., buying and selling textile machinery and supplies and handling the appraisal and liquidation of textile mill properties. Connell is a graduate of North Carolina State College in mechanical engineering.

John T. Taylor has been named manager of sales development and sales for the textile chemicals department of Rohm & Haas Co., Philadelphia, Pa. He succeeds Hector C. Borghetty, who has resigned. Taylor joined the company in 1948 after graduation from Temple University. He worked in research and development for six years before being transferred to sales development.

Clemmons D. Long, frame fixer in the carding department of the Sheeting Mill of Fieldcrest Mills, Draper, N. C., has completed 40 years of continuous service with the company. He was presented a diamond-and-gold service emblem and a gift by Robert A. Harris, vice-president of the company. Long has spent his entire career on various jobs in the card room.

Ernest H. Hart

Ernest H. Hart has been appointed to a sales promotion position with the chemical specialties department of Ciba Co. Inc., Fair Lawn, N. J. He has a wide background in sales and sales promotion in the textile industry, starting with the Cramer & King Co., Paterson, N. J., after World War I. Hart was later associated with Standard Dyeing Co. and several other firms including Kenyon Piece Dye Works and Fair Lawn Finishing Co.

Fred L. Howell Jr. and Fred J. Manly have been appointed executive vice-president and vice-president for sales, respectively, of Kerr Bleaching and Finishing Works Inc., Concord, N. C. Howell, who was formerly general superintendent, is succeeded by R. G. Richardson. Howell has been with the company since 1935 and has been general superintendent since 1947. Manly was employed by Union Bleachery in a sales capacity prior to joining Kerr in 1951.

Merrill Little has been appointed director of greige goods quality control for the textile division of Textron Inc., succeeding the late Joseph F. Merten. Little has been with the company since 1945, having spent the last two years in New York City as assistant director of greige goods quality control. Prior to that, he was in charge of mill quality control at Amerotron's Williamston (S. C.) Plant.

Hector C. Borghetty has been appointed to the position of general manager of foreign operations for General Aniline & Film Corp., according to John Hilldring, president. Borghetty was formerly manager of textile development for Rohm & Haas, Philadephia, Pa., and prior to that was manager of organic chemicals for General Dyestuff Corp. from 1938 to 1951. It was also announced that Gerard E. Neisser has been named Latin American regional manager for the company's foreign operations in addition to his present function as export-import manager of dyestuffs.

D. J. Moffie

Dr. Dannie J. Moffie, vice-president for industrial relations at Hanes Hosiery Mills Co., Winston-Salem, N. C., will be a visiting professor of psychology in the Wake Forest College evening classes program this Fall. Dr. Moffie will offer a course in industrial psychology. He was chairman of the department of psychology of North Carolina State College before joining Hanes in 1955.

William H. Ruffin, president, Erwin Mills, Durham, N. C., has been appointed as state chairman for North Carolina's United Community Campaign. He is also president of the Durham United Fund.

R. A. Bain, assistant superintendent of the Greenwood Plant, Greenwood (S. C.) Mills, has been named superintendent of the company's Plant No. 2 at Mathews, S. C. He succeeds W. C. Thompson. . . . In other personnel changes it has been announced that J. M. Phillips, Ninety-Six Plant weave room overseer, has been named to take over the spot vacated by Bain.

Dr. Victor L. Erlich has been elected vice-president and director of basic research and development of Reeves Bros. Inc., according to an announcement by John E. Reeves, president. Erlich, who has a doctor's degree in chemical engineering from the Institute of Technology, Vienna, Austria, joined the company in 1950 and later became director of research for the company's plastics division. He has been responsible for the development of polyolefin filaments.

Frederick B. Dent of Spartanburg, S. C., has been elected president of Mayfair Mills. The company operates three modern print cloth plants located at Arcadia and Easley, S. C. For the past ten years Dent has supervised operations and extensive modernization and expansion of these mills. He is a graduate of Yale University. Magruder Dent, who has served as chief executive officer of Mayfair Mills for a number of years, was made chairman of the board, a newly-created office. He also continues as president of Joshua L. Baily & Co. Inc., an affiliate.

Joseph D. Lowery has been appointed assistant general sales manager of the industrial chemicals division, American Cyanamid Co. A veteran of 36 years with the company, Lowery was formerly the manager of the company's heavy chemicals department.

The appointment of George I. Rounds as vice-president in charge of marketing of Industrial Rayon Corp. has been announced by Hayden B. Kline, president. Rounds succeeds M. P. Epstein, who is retiring but will serve the company in a consulting capacity. Rounds will have his headquarters in the company's general offices in Cleveland, Ohio, and will be responsible for all sales, market development and sales service activities. He joined the company in 1923 and has been tire cord sales manager since 1948.

Thomas P. Handwerk, executive vice-president of the Narrow Fabric Co.'s Wyomissing Paper Products Division, will also be executive vice-president of the textile division. He replaces John W. Sweeney, who retired due to ill health after 26 years with the company, as head of the textile division. Handwerk, a certified public accountant, has served as secretary and assistant treasurer for both the textile and paper divisions before being named to his present position with the paper division in 1954.

Eugene J. Wollschlager has assumed the position of administrative assistant to the president of Robinette Research Laboratories, according to an announcement by Hillary Robinette Jr., president. Wollschlager has recently returned from a tour of duty with the U. S. Army in Westeern Germany.

J. Vaughn Boone

J. Vaughn Boone has been appointed director of laboratories at Charlotte, N. C., for Geigy Dyestuffs, a division of Geigy Chemical Corp. Boone is a native North Carolinian and holds a B. S. degree in chemistry from High Point (N. C.) College. Prior to joining Geigy in 1941, he was employed in several hosiery mills and worked for a time with Burlington Mills Corp. With Geigy he has served for a number of years in the technical sales department, and has presented both in the U. S. and Canada a number of interesting papers on textile processing. His new duties involve the textile laboratories as well as the textile servicing of Geigy's Charlotte branch.

W. T. (Bill) Horton, formerly with Victor Ring Traveler Co., is now associated with Carter Traveler Co., Gastonia, N. C., as sales engineer. He will service the territory formerly served by W. Lamar Rankin who is retiring October 1.

OBITUARIES

Thomas Leo Cotter, assistant sales manager, Universal Winding Co., Providence, R. I., died suddenly at his home in Matunuck, R. I., September 10. He was due to retire in March 1959 after having been with the company for over 47 years. Cotter was placed in charge of the order department in 1919 after having joined the company as an assistant in the general services department in 1911. He was later transferred to the sales department as a sales correspondent. For several years during World War II he headed the sales department.

Ira Watson Dixon, 58, president and treasurer of Kirkman-Dixon Machinery Co., Greenwood, S. C., died last month after a long illness. Dixon first came to Greenwood in 1937 and two years later became general manager of Kirkman Machine Shop & Foundry. He had been president and treasurer of Kirkman-Dixon Co. since 1948. He is survived by his widow, a son and a daughter.

Clarence L. Jolly, 56, retired superintendent of Edna Plant, Cone Mills Corp., Reidsville, N. C., died last month. Jolly first became associated with the company in 1942 and retired last year on account of ill health. He was previously personnel manager of Dan River Mills, Danville, Va., and studied mechanical engineering at Georgia Tech. He is survived by his widow and two sons.

Howell E. Newton, 74, president of Trio Mfg. Co., Forsyth, Ga., producer of twine and cotton yarns, died recently. Survivors include his widow and two daughters.

MILL NEWS

CONSTRUCTION. NEW EQUIPMENT. FINANCIAL REPORTS. CHARTERS. AWARDS. VILLAGE ACTIVITY. SALES AND PURCHASES

KANNAPOLIS, N. C.—Cannon Mills Co., here, has reported net sales of $85,267,158 and net profits of $4,905,858 for the first half of 1958. First half net profits in 1957 were $4,843,275 on net sales of $95,248,509. The figures are from the company's semi-annual statement filed with the Securities and Exchange Commission.

ALEXANDER CITY, ALA. — The Russell Mfg. Co., here, has completed the first step in its weave room modernization program. This step consisted of the installation of 396 E-model looms that were widened to 50 inches and entirely reworked. These looms will be operated on a three-shift basis and are to replace a slightly larger number of 36 and 40-inch E-models that were operated on two shifts. All looms are equipped for use with an automatic drawing-in machine which is to be installed in the near future. A changeover in spinning with new drafting units and combers, reworked carding and drawing equipment and new spoolers and quillers has already been completed.

BLACKSBURG, S. C.—Dodgeville Finishing Co. Inc., will reopen its plant around Oct. 1 according to Paul F. Fabian, general manager. The plant has been closed for about a year and will dye and finish synthetic curtain marquisettes.

CARRBORO, N. C.—Carrboro Mills, here, is running out its stock and will cease operations around Oct. 15 according to John Davis, acting superintendent. Earlier it was thought that the mills would be closed by September. Most of the approximately 100 employees remaining will be released as work runs out in various departments. The mill management is assisting employees in finding other jobs.

SPINDALE, N. C.—Earnings of Stonecutter Mills Corp., improved last year when net income for the fiscal year ended June 30, 1958, amounted to $214,405, according to the company's annual report. The previous year netted $88,967. Gross profit before depreciation, profit sharing contribution and income taxes was $1,005,272 against $607,379 for the previous period. Figures on sales were not released by the company.

SENECA, S. C.—The Kendall Co. has purchased the plant of Abbot Worsted Co., here, and will use the facility for the manufacture of elastic goods. Part of the production being handled by the company's plants in Rockford and Chicago, Ill., and South Bend, Ind., will be transferred to the plant this Fall. Edward H. Brown, vice-president and manager of the company's Chicago division said that "this is a step in a long range program to improve efficiencies through consolidation and the further streamlining of production and to provide greater economies in warehousing and distribution." The elastic goods line includes surgical hose, athletic supporters, elastic bandages, suspensories, abdominal belts, anklets and knee pads.

GREENSBORO, N. C.—Third quarter earnings of J. P. Stevens & Co., here, showed a gain over the same period last year although total profit for the nine months of the current fiscal year was below the same 1957 period. For the three months ended August 2, 1958, consolidated net earnings are estimated at $2,527,508 after provision for $600,000 Federal and State income taxes. These earnings are on sales of $95,573,376. For the nine months ended August 2, 1958, net income after taxes on sales of $269,343,474 was $5,359,928. For the same nine months in 1957 the company showed after taxes earnings of $5,873,285 on sales of $302,793,995. Federal and State taxes in 1957 amounted to almost $8 million as compared to $2.3 million in 1958.

KNOXVILLE, TENN. — Brookside Mills, here, has increased its work force to 250 compared with only 75 in March 1957. Part of the plant is making knitting yarns and the demand is said to be strong and gradually increasing. Officials of the mill say that they expect no spurt or boom but as the market improves they will put more of the equipment into service and increase employment.

NEW YORK, N. Y.—Officials of M. Lowenstein & Sons have announced that the company will close its Wamsutta Mills in New Bedford, Mass., after the end of 1958. More than $1 million worth of almost new equipment is to be moved to the company's Carolina installations. Most of the equipment will be moved to the Lyman, S. C., plant. The New Bedford operation employed about 950 persons. Moving Wamsutta operations to the South gives the company "central productive facilities in the Carolinas," according to Edward Goldberger, treasurer. Competition from Japanese products was listed by Goldberger as the New Bedford plant's problem. Earlier this year the Lowenstein firm closed its denim plant in New Orleans, La. Donald B. Tansill, Wamsutta president, said of the closing, "In spite of dedicated management and skilled workers in a co-operative community, we were just not able to make a success of the operation." He also cited foreign competition as a major factor and added that matters were not helped by the "complete lack of understanding of the industry's problems by Washington as shown by the passage of the Reciprocal Trade Agreements Act."

BEDFORD, VA.—All of the outstanding stock in Hampton Looms of Virginia Inc., here, has been acquired by Charles J. Webb Sons Co., Philadelphia, Pa. The Webb com-

pany had previously been the majority stockholder. Company officials announced that there will be "absolutely no change" in management or policies of the newly acquired operation. No purchase price was announced for the woolen apparel fabric producer.

CLINTON, S. C.—Clinton and Lydia Mills, here, and Calhoun Mills, Calhoun Falls, S. C., have announced plans to sell their company-owned houses. Clinton and Lydia will sell a total of 670 houses and will offer them first to current occupants. Calhoun Mills plans to put 109 homes on the market and will also offer them to occupants first.

WEST POINT, GA. — Four subsidiary companies of West Point Mfg. Co., here, have surrendered their charters and become operating units of the parent company. The subsidiaries are: Dixie Mills Inc., LaGrange, Ga.; Columbus (Ga.) Mfg. Co.; Equinox Mill and Wellington Mills Inc., both of Anderson, S. C. Presidents of the former subsidiaries have been named vice-presidents of the West Point Mfg. Co., in charge of operations at the new divisions. The newly designated executives are B. W. Whorton, Dixie; Forbes Bradley, Columbus; A. B. Calhoun, Anderson divisions. Aubrey Marshall, former president of Wellington, has retired. Operations at the four divisions will not be affected.

MACON, GA.—Willingham Cotton Mills, here, has ordered 21 frames of N.Y.A.F. changeover from the F. A. Young Machine Co., Gastonia, N. C.

SHERMAN, TEX.—The Sherman Mfg. Co., Burlington Industries Inc., here, has announced that 44 looms will be added to its weave room. The addition will bring to 575 the number of looms in the heavy duck and sheeting plant. The new output will be designed primarily for the fitted sheet market. No additional floor space is required since adequate room for the equipment expansion was provided in a recent building program.

LAURENS, S. C.—Firth Carpet Co.'s new plant here has gone into limited production. The first of many Jacquard-Wilton looms to be installed weighs about 35 tons and produces carpeting 15 feet wide. The company will manufacture Wilton carpets in the plant on machinery which is being started up as fast as it can be installed.

TUXEDO, N. C.—Green River Mills Inc., here, has announced that it will cease production as soon as present stocks are run out. The company currently employs some 260 workers and is engaged in making combed cotton yarns. "Serious financial losses" were given as the reason for closing the plant which was built in 1907.

SOUTH BOSTON, VA.—Employees of the Carter-South Boston plant of J. P. Stevens & Co. recently received an award for operating 4,000,000 man-hours without a lost time accident. Top officials of the Stevens organization, headed by the company's president, Robert T. Stevens, paid tribute to

(Continued on Page 145)

S.T.A. Announces Fall Meeting Schedule

W. D. Vincent

Walter D. Vincent of Dan River Mills, president of the Southern Textile Association, has announced the following schedule for the association's Fall 1958 divisional meetings. The South Carolina Division, headed by W. B. Etters of Reeyes Bros. Inc., Spartanburg, will meet Saturday morning, September 27, at Clemson College. The Northern North Carolina-Virginia Division will meet in Greensboro, on Saturday morning, October 18. H. W. Buchanan of Erlanger Mills, Lexington, N. C., chairman of the division, will announce the site for the meeting as soon as arrangements have been completed.

The third Fall meeting will be that of the association's Eastern Carolina Division on Saturday morning, November 15, at the School of Textiles, North Carolina State College, Raleigh. The Piedmont Division will meet Saturday morning, December 6, at the Johnston Memorial Y.M.C.A. in Charlotte, N. C. Marion Allison of Cone Mills Corp., Hillsboro, N. C., is chairman of the Eastern Carolina Division. The Piedmont Division is headed by M. L. Brackett of Highland Park Mfg. Co., Charlotte.

Programs for the divisional meetings are now being worked out, Mr. Vincent reports, and all of the meetings are open to textile mill operating executives regardless of whether or not they hold membership in the association.

A.T.O.E. Quality Control Talks Set For Oct. 4

Arrangements have been completed for a Quality Control Clinic at Thach Hall, Alabama Polytechnic Institute, Auburn, October 4, sponsored by the Alabama Textile Operating Executives. An opportunity will be provided to discuss any problems brought up but specific discussions will concern: (1) effect of immature fibers on quality; (2) controlling picker lap quality; (3) process control of carding and drawing; (4) controlling roving and yarn quality during processing; and (5) comparison of test results between mills. Charles Wilson, director of research, West Point (Ga.) Mfg. Co., will serve as general chairman of the meeting.

Combed Yarn Spinners Elect Gamble

The Combed Yarn Spinners Association held its 33rd annual convention at The Cloister, Sea Island, Ga., September 11-12. Addressing the convention were Congressman W. J. Bryan Dorn (D., S. C.), C. K. Torrence, Superior Yarn Mills, Mount Holly, N. C., and president of the association, and Halbert M. Jones, president of the American Cotton Manufacturers Institute. Congressman Dorn authored a substitute foreign trade measure in the last Congress and was active, along with the textile industry, in opposing the administration's foreign trade extension act, which was adopted. He pledged renewed efforts to secure effective import controls and a "realistic" farm program for cotton. He told the spinners that textiles continue to be imported to this country from foreign lands via trans-shipment. Dorn added that the African Star docked in New York September 8 with 96,000 pounds of "tissue" from Durban, South Africa, which was textiles consigned on order. He further declared that the Federal

support program had brought about the ruin rather than the salvation of the small Southeastern cotton farmer. He advised the textile men to start immediately to see that the Reciprocal Trade Program is properly administered.

In the president's address, Torrence said that textile men must unite and they must obtain the co-operation of allied industry to influence legislation which affects their business. He noted that laws and treaties affected business from many different angles and that the industry's internal improvements may go for naught unless the industry itself effectively calls attention to legislation which is detrimental. He said that if combed yarn spinners would control their backlogs, the price would take care of itself. He advocates plant modernization at the most rapid practical pace, advertising through trade journals to develop new business, and research for improvement of both yarns and machinery. Even with these things, however, he noted "we are still going to be behind the eight-ball unless we pay more attention to legislation that is now and will continue to affect our industry."

Jones declared that the work of the Senate subcommittee investigating the problems of the textile industry "will affect, for good or ill, all relations between the government and the textile industry in the foreseeable future." The investigating group has scheduled hearings in New England and the South and will meet in Clemson, S. C., September 29, and in Charlotte, N. C., September 30. Mr. Jones said that he felt the hearings and the work of the committee were extremely important because "the members of the committee are deeply concerned about and sympathtic to the problems of textiles and are determined to develop recommendations which will be constructive."

"The record of the hearings will establish the most comprehensive current review of the textile industry that is available. This record will become a source of material to be used for years on any legislative proposal which affects the industry." he said. The textile industry is not seeking any hand-outs from the government, Mr. Jones said, "if we seek anything in the hearings it is this—recognition of the vital and important place which this industry and its employees occupy in the total economy and . . . an assurance of fair and just consideration for our industry and for those working in it in all of our relations with the government and its policies."

He cited as the most serious threat to U. S. textiles in the years ahead the possibility of an increasing flood of imports from the low wage areas of the world. The textile industry in the U. S. is "potentially in the strongest position of its history," he said. The financial strength of the industry as a whole has never been greater. Research is expanding rapidly, stimulated by and producing new fibers, new finishes, new processes and new products. Sound merchandising and more efficient production are evident. "The textile industry, because of these fundamental strengths, possesses the potential for a vigorous and dynamic future, provided some of the serious problems which have been placed in our way by the Federal government can be solved and, especially, provided this industry is protected from a flood of low-wage imports from foreign textile producers," he concluded.

Shannon M. Gamble, executive vice-president, Standard-Coosa-Thatcher Co., Chattanooga, Tenn., first vice-president of the association, was elected to the association's presidency. He has spent his entire career with the com-

pany starting work at less than 19 in May 1913. Alex W. Bell, American & Efird Mills, Mount Holly, was advanced from second to first vice-president of the association and J. L. Barnett of South Fork Mfg. Co., Belmont, N. C., was elected the new second vice-president.

In other elections, M. T. Cameron, A. M. Smyre Mfg. Co., Ranlo, N. C., was re-elected treasurer. Directors named for three-year terms are: S. P. Stowe Jr., Climax Spinning Co., Belmont; T. W. Borland, Cartex Mills, Salisbury, N. C.; Howard K. Houser, Rhyne-Houser Mfg. Co., Cherryville, N. C.; and John Crawford, Rowan Mills, Salisbury. C. C. Dawson, Cramerton, N. C., is executive secretary of the association.

A.I.E.E. To Meet In Raleigh Oct. 30-31

The American Institute of Electrical Engineers has announced that its annual Fall textile conference will be held at North Carolina State College, Raleigh, Oct. 30-31. It is sponsored by the Institute's Textile Subcommittee. Eight papers on electrical engineering aspects of the textile industry will be presented. Howard E. Strock, Charlotte, N. C., is the conference chairman. D. Elmer Johnson, of N. C. State College, will address a luncheon during the conference.

Scheduled papers include: "Overload Protection of A.C. Motors," by C. R. Whitney, Square D Co., Milwaukee, Wisc.; "Maintenance Control for the Textile Mill," by A. D. King, General Electric & Engineering Co., Cleveland, Ohio; "Mechanical Design of Electrical Equipment," by O. K. Sweeney, Westinghouse Electric Corp., Buffalo, N. Y.; "Motor Control Problems," by H. Dudley Blake, Allis-Chalmers Mfg. Co., East Allis, Wisc.; "The Function of Trip Units and Relays in Industrial Plants," by E. R. Burgin, I-T-E Circuit Breaker Co., Philadelphia, Pa.; "Use of Snap-Action and Mercury Switches in the Textile Industry," by R. W. Pashby, Minneapolis-Honeywell Regulator Co., Freeport, Ill.; and "Instrumentation in Textile Plants," by M. J. Fjield, Burlington Industries, Greensboro, N. C.

Chemical Finishing Conference Oct. 1-2

The National Cotton Council has announced that Lawrence Marx Jr., president, National Association of Finishers of Textile Fabrics, will be general chairman of the 7th annual chemical finishing conference which will be held in Washington, D. C., on October 1-2 at the Statler Hotel. Recent developments in finishes for wash-and-wear cottons will be the subject of a majority of the technical papers presented. Mr. Marx is also vice-president and director of United Merchants and Manufacturers Inc., New York, and vice-president of the Clearwater Finishing Co.

Session chairmen for the opening day of the conference are J. David Reid, head of chemical finishing investigations, Southern Regional Research Laboratory, New Orleans; and Alfred E. Brown, vice-president, Harris Research Laboratory, Washington. Session chairmen for the second day will be Arnold L. Lippert, vice-president and director of research, Joseph Bancroft & Sons Co., Wilmington, Del.; and John W. Howard, staff member, utilization research division, National Cotton Council.

During the opening session, Rex H. Fink, manufacturing staff associate, Clorox Co., will discuss bleaching of cotton in home laundering. Following his talk, Hugh H. Mosher,

research chemist, Arkansas Chemical Co., Newark, N. J., will cover chlorine retention in resin-treated cotton. This session will also include a technical paper on the effect of creaseproofing agents on light fastness of sensitive dyes by Herman B. Goldstein, manager, production and research, Warwick Chemical Co., Wood River Junction, R. I. The final paper of the first session will cover acid resin colloids for weather and rot resistance, delivered by W. Norbert Berard, cotton technologist, S.R.R.L.

Improving smoothness of cotton fabrics will be discussed at the afternoon session by Charles F. Goldthwait, visiting professor, School of Textiles, North Carolina State College, Raleigh. He will be followed by Rollin S. Orr, S.R.R.L., who will cover cotton fiber structure and mechanical properties. A. Mason DuPre Jr., assistant division director, S.R.R.L., will wind up the session with a paper on mechanisms of permanent set and wrinkle recovery.

The morning session on Thursday, October 2, will be devoted to discussion of the four most popular crease proofing agents for white cottons. Triazone resins will be discussed by Rosser L. Wayland Jr., research director, Dan River Mills, Danville, Va. Acetals will be covered by James B. Irvine, director of new product development, Quaker Chemical Products Corp., Conshohocken, Pa. A discussion of epoxy blends will be given by Fred B. Shippee, research associate and consultant, Gagliardi Research Corp., East Greenwich, R. I. Triazines will be covered by Theodore F. Cooke, assistant to the manager, American Cyanamid Co., Bound Brook, N. J.

At the final session wrinkle resistance with A.P.O. resins will be reported by George L. Drake Jr., S.R.R.L. The final paper of the conference will be delivered by Albert C. Nuessle, head of textile applications research laboratory, Rohm & Haas Co., Philadelphia, and will cover amine odor in resin-treated fabrics.

Carded Yarn Group Schedules Meeting

Attendance of about 200 is expected for the annual convention of the Carded Yarn Association at the Homestead, Hot Springs, Va., October 29-30. Halbert M. Jones of Laurinburg, N. C., president of the American Cotton Manufacturers Institute and also the North Carolina Textile Manufacturers Association, will address the convention at the general session on Thursday, October 30. The

other speaker on this program will be Dr. Claudius T. Murchison, retired chief economist of the A.C.M.I. and a former president of the Cotton Textile Institute, one of the predecessors of the A.C.M.I.

Owen Fitzsimmons, Charlotte, N. C., executive vice-president of the Carded Yarn Association, said the membership business meeting would be held Wednesday, October 29, when reports of officers and committee chairmen will be heard and new officers will be elected. J. A. Conner, vice-president of Hyde Park Mills Inc., is president of the association. If custom is followed, A. J. M. Wannamaker, Orange Cotton Mills, Orange, S. C., will move up from first vice-president to president and L. E. Bowen Sr., Tifton (Ga.) Cotton Mills, will move from second to first vice-president. Six new members of the board of directors will be named.

Davis Elected To Head Fiber Society

S. Jack Davis

S. Jack Davis, The Chemstrand Corp., Decatur, Ala., was elected president of The Fiber Society at the group's annual business meeting at the Queen Elizabeth Hotel, Montreal, Canada. The meeting was a part of a two-day technical program held by the society. Davis succeeds Wayne S. Sisson, of the American Viscose Corp., Marcus Hook, Pa. Other officers elected were Ernest R. Kaswell, Fabric Research Laboratories Inc., Dedham, Mass., vice-president; E. V. Painter, Johnson & Johnson, Chicago, Ill., and Dr. Howard J. White Jr., Textile Research Institute, Princeton, N. J., to three-year terms on the Governing Council. Re-elected were Julian S. Jacobs, Textile Research Institute, Princeton, N. J., secretary; and Dr. Hugh M. Brown, research consultant, Clemson, S. C., treasurer.

Davis is manager of textile applications research for Chemstrand's marketing division. He has served as vice-president of the society the past year. Prior to joining Chemstrand in 1952, he was associated with Callaway Mills, La Grange, Ga., where he was successively research chemist, chief chemist and assistant to the director of research. He holds degrees from Emory University and Harvard.

The technical sessions of the society's meeting heard various talks including one describing a new testing instrument to aid in investigating the phenomena of static electrification and friction of moving yarns by Dr. D. A. Saukelies, Chemstrand Corp. He pointed out that this device handled yarn in such a way that a known and constant tension could be maintained in a length of rapidly moving yarn. With the device, yarn velocities from practically zero to 2,000 feet per minute and tensions from about one gram to 200 grams could be obtained.

Dr. J. H. Dillon, Textile Research Institute, delivered a joint paper, credited also to J. B. Levy and J. H. Wakelin, T.R.I., and W. J. Kauzmann, Princeton University, on "Relation of Charge to Frictional Work in the Static Electrification of Filaments." Dr. Dillon described the apparatus by which both the charge and the mechanical work of rubbing were simultaneously measured when one fiber was rubbed on another. He gave results obtained with several fiber types.

He indicated that these studies revealed that the velocity of rubbing strongly affected both static charge developed

and the frictional work. The charge decreases as the work increased and the velocity increases. A mineral oil on the fibers was found to reduce both charge and frictional work in most cases, though with viscose rayon rubbed on nylon both were increased. He pointed out similar situations where lubricants caused increases in frictional forces as in the oiling of wool.

Dr. Daniel Gintis delivered a paper co-authored by himself and Edward J. Mead, both of Dacron Research Laboratory, The Du Pont Co., concerning the mechanism of pilling. Time lapse motion pictures were taken of pills in the process of formation in fabrics undergoing mild abrading action. They showed that the abradant acted on exposed fiber sections to pull loops which then opened to form fuzz. When fuzz density reached a critical point, a pill formed quickly. Further abrading action also twisted and entangled any nearby fibers to make the familiar mat or ball which ultimately wore off or broke away.

Dr. Gintis said that the tendency of a fiber to become entangled was determined by its cross-sectional shape, diameter and bending stiffness. Strength and abrasion resistance determine the amount of wear necessary to remove pills. He made a particular point of the reduced tendency for entanglement which results when samples of a given fiber are prepared with a ribbon cross-section rather than the more conventional round shape.

"The Fiber Structure and Mechanical Properties of Untreated and Modified Cottons," was the title of a paper given by R. S. Orr of the Southern Regional Research Laboratories and co-authored by James N. Grant, S.R.R.L. Cottons of a wide range were given chemical and physical treatments such as mercerization, decrystallization with anhydrous ethylamine and resin treatments. The fibers were studied when relaxed and when under strain. The paper noted that uniformity of strength along fiber length was improved by mercerization and to some extent by wetting but it was reduced by degradation. Something of the mechanism of strength loss with degradation was also reviewed by the speaker. Orr said the large decrease in fiber strength in resin treatments of slack fibers could be attributed to crosslinking the cellulose chain in an unfavorable position for equal stress distribution within the fiber.

N.C.T.M.A. To Meet Oct. 9-10

Lester O. Naylor of New York, a vice-president of Montgomery Ward & Co., will be one of the two featured speakers at the 52nd annual meeting of the North Carolina Textile Manufacturers Association at the Carolina Hotel at Pinehurst, October 9 and 10, according to Hunter Marshall, secretary and treasurer of the N.C.T.M.A. Naylor, head of Ward's New York division and also soft lines divisional merchandise manager, will speak at the morning session on October 10. His talk will follow an address by N.C.T.M.A. president, Halbert M. Jones of Laurinburg, president of Waverly Mills Inc. Mr. Jones also is president of the American Cotton Manufacturers Institute.

The two-day meeting opens at 10:30 a.m. on October 9 with an executive business session. Reports will be given by William C. Cannon of Kannapolis, chairman of the board of directors, and these chairmen of the association's committees: Hal W. Little of Wadesboro, legislative; R. D. Hall of Belmont, tax; Julian Robertson of Salisbury,

traffic; D. R. LaFar Jr., of Gastonia, finance; C. G. Buie of Biscoe, safety; C. A. Cannon of Kannapolis, cotton and employment security; J. A. White of Greensboro, textile school; J. D. Siewers of Winston-Salem, classers; and Carl R. Harris of Durham, resolutions.

Election of officers will be held Friday morning, following a report by J. C. Roberts of Gastonia, chairman of the nominating committee. If custom is followed, William C. Cannon, first vice-president, will succeed Jones. J. C. Cowan Jr., of Greensboro will be elevated from second to first vice-president. The new officers will be presented at a banquet Friday night. Approximately 250 members and guests are expected to attend.

New Gin Practice Raises Mill Costs

A study by the Agricultural Marketing Service of the U. S. Department of Agriculture has revealed that "effects of cleaning practices at gins on fiber properties and mill performance of cotton" showed the use of additional cleaning equipment in gins and the reduction of moisture content of lint adversely affected the length of the fiber as determined by the fiber array method. Such practices, however, raise the grade of cotton substantially. Additional lint cleaners used after ginning did not appear to affect the length of the fibers but a reduction of moisture significantly increased the proportion of fibers shorter than one-half inch.

The reduction of moisture in lint was also associated with a slight decrease in strength. Yarn breakage during spinning was increased by the reduction of moisture and by use of lint cleaners. Higher proportions of short fibers also were accompanied by increases in yarn breakage. The study was made in co-operation with the American Cotton Manufacturers Institute, the National Cotton Council and the Institute of Textile Technology.

"We Love Too Much . . . . ."

John A. Freed, advertising manager, Universal Winding Co., Providence, R. I., notes that this business world would be sad indeed if something worth a good chuckle didn't occur once in a while. As a case in point he quotes a recently received letter from a South American manufacturer who is obviously extremely good in his business but a shade shy in the English language.

"Dear Sirs," the letter says, "We have in use for many years one Leesona Winder Mod. 50 R Serial Number F 40170-73. We love too much this very good machine, because she make very good money for us, and is right to have very much care with she.

"Actually she need some spare parts, and we don't have catalog of them. Can you send us one, and price list as well? Thank you very much, and we remain . . ."

Needless to say, this customer got the catalog he wanted.

Cotton Woven Production Down

After increases for two years, the production level of cotton broad woven goods for 1957 fell below that of any year since 1946 with the exceptions of 1949 and 1952. The 1957 production level was eight per cent below the 1956 level and six per cent below that of 1955. The 1957 production of print cloth and sheeting fabrics was four to six per cent below the 1955-56 level and lower than

that of any year since 1952.

Although the 1957 production of fine cotton fabrics was ten per cent lower than 1956 and one per cent lower than 1955, it was higher than for any other year during the last 12 years. Towels, toweling and wash cloth production was down four per cent in 1957, but was higher than in any other year in the last 12 years. The 1957 production levels for both colored yarn fabrics and napped fabrics declined rather sharply and were the lowest in over 12 years. Production of duck and allied fabrics was lower in 1957 than for any year since 1949. During 1957 looms in place decreased by one per cent to 351,657. They have decreased steadily from over 400,000 to 351,657 since the end of World War II.

Cotton used during the 12 months through July 1957 amounted to 8,728,201 bales while the 12 months prior to the end of July 1958 saw 7,983,360 bales consumed. The daily average consumption in the U. S. during July 1958 was 30,705 as compared with 32,937 bales daily in July 1957. Total cotton bales held by consuming establishments and public storage in July 1958 were 8,453,746 which is sharply down from the July 1957 total of 11,025,627.

Woolen Woven Goods Off

Annual production of woolen and worsted fabrics has steadily declined from an all time high of 604 million yards in 1946 to 291 million yards in 1957, according to the Bureau of the Census. With the exception of 1954, the 1957 production level was lower than for any year since 1933. Production in 1957 was ten per cent below the output of 1956 and eight per cent below the 1955 level.

Apparel fabrics account for the bulk of woolen and worsted fabrics and, although they have declined since World War II, they have increased in proportion to total woolen and worsted production from 87 per cent in 1946 to 96 per cent in 1957. Men's and women's apparel each account for roughly half the apparel fabrics. While production levels of men's and women's apparel fabrics have been increasing since 1951, in 1957 they fell 17 and seven per cent respectively below the 1956 level. However, production in 1957 was still above that in 1954.

The production of wool nonapparel fabrics has decreased from 80 million linear yards in 1950 to 11 million linear yards in 1957. Woven felt production in 1957 was 15 per cent below the 1956 level. During 1957, looms in place at mills primarily producing woolen and worsted fabrics decreased by five per cent to 15,610 looms. This decrease continues the trend since World War II.

The weekly average rate of fiber consumption on the woolen and worsted systems in July 1958 was 13 per cent below the June rate and two per cent below that of July 1957. Consumption of carpet class wool was nine per cent below the rate of the preceding month and 13 per cent below the July 1957 rate.

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TEXTILE BULLETIN is devoted to the dissemination of information and the exchange of opinion relative to the spinning and weaving phases of the textile industry, as well as the dyeing and finishing of yarns and woven fabrics. Appropriate material, technical and otherwise, is solicited and paid for at regular rates. Opinions expressed by contributors are theirs and not necessarily those of the editors and publishers. ¶ Circulation rates are: one year payable in advance, $1.50; two years payable in advance, $2.00; one year, Canada, $3.00; one year, other countries in Postal Union, $5.00; single copies, 25 cents. ¶ A companion monthly journal, THE KNITTER, is published by Clark Publishing Co. and devoted to the interests of the knitgoods manufacturing industry.

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Fallacy Of High Prices, Low Production Realized

THE American cotton economy is still left saddled with a two-price cotton marketing system which is grossly unfair to domestic manufacturers and which unquestionably has played a large role in keeping cotton from being competitive both in domestic and foreign markets. Despite this basic drawback, however, the government's revised cotton policy as exemplified in the farm bill which was hammered through Congress in the last days of the session is encouraging to the manufacturing segment of the U. S. industry. Essentially it means that the fetish of low production and high prices has been recognized as a fallacy.

For one thing, the new legislation affecting cotton represents the first time since government policy has directed the production and marketing of American cotton that there has been a break from the established concept of rigid controls. Some textile industry leaders have hailed this new concept as entailing a measure of freedom which should make domestic cotton more competitive, since it provides a way for American growers to increase their acreages in 1959. This holds especially true if the new bill, as it pertains to cotton, is considered as being in the nature of a stop-gap or temporary compromise for a year or two until a comprehensive long-range plan is evolved.

In the final analysis, what the new act does is to insure more adequate supplies for the mills by averting a disastrous acreage cut next year. At the same time it affords the cotton producer adequate protection and is a move in the right direction toward competitive prices. As noted by C. A. Cannon, president of Cannon Mills Co. and chairman of the A.C.M.I. Cotton Committee, "While the effects of this new bill will not be felt until 1959, we can at least begin planning now with assurance of adequate cotton production."

From the mill standpoint, the supply outlook has been extremely critical, especially in respect to better grades. It is heartening to note, however, that the government's September 8 forecast is for a crop of 12,105,000 bales, which is 522,000 bales above the forecast of a month earlier. The indicated crop is 2,031,000 bales less than the ten year (1947-56) average and is being grown on the smallest acreage since 1876. The reduction in acreage this year has actually been more than offset by an increase in the acre yield, which is expected to average 486 pounds per harvested acre, surpassing the previous records of 417 pounds set in 1955.

Under the new law the minimum national acreage allotment for 1959 will be 16 million acres instead of 13¾ million as would have been the case under the old law. Growers will be permitted to increase their 1959 plantings up to 40 per cent of their individual allotments with reduced price-support levels or retain their allotted acreages and price supports provided by the old law.

The new cotton law staved off a threatened acreage slash of 22 per cent in cotton next year. It represents not all that the administration sought, of course, and likewise it represents considerably less that the manufacturing industry would have liked. The administration gave unqualified support to the new program, however, even if it came only after Congress had taken the initiative and drafted it. Hence, for the first time, the administration is put in a positive rather than a negative position on a cotton program.

It is to be expected that Agriculture Secretary Ezra Taft Benson and his aides will go all out to make the new farm program succeed and, as a matter of fact, inter-departmental planning meetings are already in progress. Mr. Benson now has a farm program that he can call his own. He endorsed

it. The "escalator" clause has been wiped out and he has been given wide discretion in fixing price supports as well as in determining the national acreage allotment.

What Congress actually did was to write in the minimums. The "choice" plan will hold price supports relatively high for the next two years but after that, in 1961, Mr. Benson can cut them to as low as 70 per cent and in 1962 to as low as 65 per cent. For Mr. Benson it represents a dramatic comeback from what appeared a few months earlier to have been a point of no return.

From the producer standpoint the new program, to succeed fully, must bring about sizeable increases in exports and domestic consumption, reduce cotton prices, increase the farmer's net income, reduce surplus and increase acreage allotments. If the new cotton program attains all such objectives, even to a considerable degree, it could have far-reaching political implications since it is not inconceivable at this stage that the next election could well be fought on the outcome of the farm problem.

Another political aspect of the passage of the new farm bill is that it would seem to indicate the waning power of the so called farm block since it was the first time, in a matter of major consequence, that this group failed in high-pressuring the administration into backing the type of legislation it wanted. In the strictest sense, the new farm bill is really a victory for the American farmer and the American public. And another facet not to be ignored is that it could lead to the final dissolution of one of the strangest political alliances in U. S. political history —the New Deal "shotgun" marriage of organized labor and farm interests.

It is to be fervently hoped that cotton legislation in 1958 is but a step in the beginning of putting cotton back on the right track which would involve making a clean break with the 1930s and dealing soundly with agriculture and world conditions as they exist in the late 1950s.

It is generally conceded that the principal drawback to getting adequate remedial legislation, either for the short range or the long range, has been the inability of the many segments of the industry and the trade to get together on and solidly back or present to Congress a program or plan acceptable to the entire industry. Billions of dollars have been poured by the government into price supports, crop loans and the soil bank since the first price support law was passed in the 1930s to meet depression conditions that were exactly the opposite of the situation in subsequent years.

The cotton growers and their representatives in Congress, it is true, were primarily responsible for originally getting the government in the cotton business. They wanted their prices protected and to get as much as possible for their product wherever it was sold, here or abroad. The government got deeper and deeper in the cotton business, while the U. S. price support umbrella encouraged production abroad and U. S. cotton gradually lost its historic overseas markets. Despite progressively severe acreage restrictions, the government's accummulation of loan cotton became unwieldly. An acute crisis developed when the Commodity Credit Corp.'s accummulation of surplus stocks reached unmanageable proportions bordering on the fantastic.

The government then embarked upon disposing of its surplus stocks overseas, at a discount or bargain basement price, as much as 20 per cent under what domestic cotton costs in U. S. mills. As a consequence, U. S. raw cotton exports in 1957 moved up from a dismal 2.3 million bales to 7.6 million bales. Then—quite suddenly, it seemed—the government's cotton policy and the vagaries of nature conspired to leave U. S. producers and mills both in a rather alarming situation. A rather rare combination of a late crop and bad weather extending all the way from the Carolinas to California, it became apparent, not only created an extremely short crop but also caused a severe quality deterioration and a shortage of the better grades, since there is little cotton of desirable grades, of course, in the Commodity Credit Corp. stocks.

TEXTILE INDUSTRY SCHEDULE

— 1958 —

Sept. 25-26 (Th-F)—Fall meeting, **TEXTILE QUALITY CONTROL ASSOCIATION**, The Grove Park Inn, Asheville, N. C.

*Sept. 27 (Sa)—Fall meeting, **SOUTH CAROLINA DIVISION, SOUTHERN TEXTILE ASSOCIATION**, Clemson, S. C.

Oct. 1-2 (W-Th)—Seventh annual **CHEMICAL FINISHING CONFERENCE** (sponsored by the National Cotton Council), Washington, D. C.

*Oct. 5-6 (Su-M)—**DIXIE PUBLIC RELATIONS CONFERENCE** (sponsored by the Public Relations Society of America), University of Georgia, Athens.

Oct. 6-10 (M-F)—**SOUTHERN TEXTILE EXPOSITION**, Textile Hall, Greenville, S. C.

Oct. 9-10 (Th-F)—Annual meeting, **NORTH CAROLINA TEXTILE MANUFACTURERS ASSOCIATION**, Carolina Hotel, Pinehurst, N. C.

Oct. 10 (F)—Fall meeting, **SOUTHERN TEXTILE OVERSEERS ASSOCIATION**, Greenville, S. C.

Oct. 14-17 (Tu-F)—Fall meeting, **A.S.T.M. COMMITTEE D-13 ON TEXTILES**, Sheraton-McAlpin Hotel, New York City.

*Oct. 18 (Sa)—Fall meeting, **NORTHERN NORTH CAROLINA-VIRGINIA DIVISION, SOUTHERN TEXTILE ASSOCIATION**, Greensboro, N. C.

Oct. 21-22 (Tu-W)—**THE 1958 COTTON SPINNER-BREEDER CONFERENCE**, Lubbock, Tex.

Oct. 23-24 (Th-F)—Fall meeting, **SOUTHERN TEXTILE METHODS AND STANDARDS ASSOCIATION**, The Clemson House, Clemson, S. C.

Oct. 25 (Sa)—Fall meeting, **ALABAMA TEXTILE OPERATING EXECUTIVES**, Thach Auditorium, Alabama Polytechnic Institute, Auburn, Ala.

Oct. 28-29 (Tu-W)—Technical Advisory Committee and Board of Trustees meetings, **INSTITUTE OF TEXTILE TECHNOLOGY**, Charlottesville, Va.

Oct. 23-31 (Tu-F)—Annual meeting, **CARDED YARN ASSOCIATION**, The Homestead, Hot Springs, Va.

*Oct. 30-31 (F-Sa)—Fall textile conference, **AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS** (Textile Subcommittee), North Carolina State College, Raleigh, N. C.

Oct. 30-Nov. 1 (Th-Sa)—National convention, **AMERICAN ASSN. OF TEXTILE CHEMISTS & COLORISTS**, Conrad Hilton Hotel, Chicago, Ill.

Oct. 30-Nov. 1 (Th-Sa)—Fall meeting, **J. E. SIRRINE TEXTILE FOUNDATION**, Clemson, S. C.

Nov. 7-8 (F-Sa)—**TEXTILE SEMINAR** (sponsored by the University of Georgia Division of Clothing and Textiles in Extension, Teaching, Research), Georgia Center for Continuing Education, Athens, Ga.

Nov. 8 (Sa)—Fall meeting, **TEXTILE OPERATING EXECUTIVES OF GEORGIA**, Georgia Tech, Atlanta.

*Nov. 15 (Sa)—Fall meeting, **EASTERN CAROLINA DIVISION, SOUTHERN TEXTILE ASSOCIATION**, North Carolina State College, Raleigh, N. C.

*Dec. 6 (Sa)—Fall meeting, **PIEDMONT DIVISION, SOUTHERN TEXTILE ASSOCIATION**, Johnston Memorial Y.M.C.A., 3025 North Caldwell Street, Charlotte, N. C.

(M) Monday; (Tu) Tuesday; (W) Wednesday; (Th) Thursday; (F) Friday; (Sa) Saturday

**Listed for the first time this month. ‡Tentative listing. †Changed or corrected from previous issue.*

(Continued from Page 133)

local workers. The plant has operated since Feb. 7, 1955, without a disabling accident. This is the best safety record in the Stevens chain of 42 plants, according to a company official. In recognition of the achievement, the mill was awarded a plaque by the Liberty Mutual Insurance Co.

DALLAS, TEX.—Construction has begun on a new warehouse and office building for the Callaway Mills Co., LaGrange, Ga., in the Brook Hollow industrial district here. The new 12,000-square-foot, brick building will be a Southwest distribution point for carpets. Construction is expected to be completed about January 1, 1959.

LINDALE, GA.—The new 105,000-square-foot, one-story, brick building erected for the Pepperell Mfg. Co., here, is completed and is being occupied. G. Howard Smith, general manager, emphasized that this is not an expansion in the company's production. Approximately 1,000 looms will be moved from an old building because vibration in the old structure made operations difficult. No new equipment is to be added.

LEXINGTON, S. C.—The Red Bank Mill Inc., here, has been purchased by the Textile Banking Co. Inc., New York City. The price recorded on the deed for the property is $230,000. For the past several months production has been curtailed with the mill changing over for the manufacture of an inner lining fabric. The mill formerly produced corduroy on its 254 looms.

HOGANSVILLE, GA.—The Asbeston Mill of the U. S. Rubber Co., here, is in the process of being expanded with new machinery to be installed over the next three years and about 25 persons added to the present work force of 120. New spinning frames, twisters, looms and automatic bobbin winders will be installed in the asbestos fabric producing plant.

MAIDEN, N. C. — Some 2,000 persons turned out recently for the annual Carolina Mills fish fry. The high spot of the afternoon, which saw some 650 pounds of fillet of haddock consumed, was the awarding of service pins to 98 employees. Houston Charles Caldwell, Powell R. Williams and Thomas P. Pruitt were awarded 40-year pins.

MONROEVILLE, ALA.—Vanity Fair Mills Inc., here, is currently engaged in an expansion program financed by the sale of $1,750,000 in bonds and an additional $212,500 supplied by the mill. The bond sale was handled by the central committee of the Chamber of Commerce which contacted local residents for subscriptions. The bonds will pay four per cent interest semi-annually and some are to be retired in a six month period. Work on an office and warehouse extension has been completed. Construction of additional sewing room facilities is in the process of completion. Expansion of the cloth preparation facilities is next on the expansion program. Some 150 additional employees will be hired by the company as a result of the program.

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